Report of the Hospital for Sick Children Review Committee

January 1983

REPORT OF THE
HOSPITAL FOR SICK CHILDREN
REVIEW COMMITTEE

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Ontario

The Hospital For
Sick Children
Review Committee

The Honourable Larry Grossman, Q.C.
Minister of Health
Hepburn Block
Queen's Park
Toronto, Ontario

Dear Mr. Minister:

Pursuant to Section 7a of the Public Hospitals Act, we are pleased to submit our Report on the Hospital for Sick Children as mandated by Order in Council, No. 1536/82, dated June 3, 1982.

All of which is respectfully submitted.

Charles L. Dubin, Chairman

Joan M. Gilchrist

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January 19, 1983

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Preface

The Hospital for Sick Children was first established by a private Act of the Legislature of Ontario in 1915. For years it has devoted its resources and energy to excellence in the area of patient care, prevention of children's illnesses, teaching and research. It is presently one of a very few unique and specialized health institutions dedicating their care to children and is the largest such institution in North America. It has long enjoyed an international reputation for its contribution to the advancement of child health care.

Of recent date, however, incidents have occurred in the Hospital which have brought into issue the validity of its high reputation, resulting in concern as to the quality of the care of the patients treated at the Hospital, the safety and security of the patients, and the quality of the management and administration of the Hospital.

One Steven Yuz, a patient, died on February 20, 1980. The circumstances surrounding his death resulted in a coroner's inquest. The coroner's jury concluded "that Steven Yuz died as a result of his debilitated state; as a result of cardiac arrest; as a result of dehydration; as a result of inadequate I.V. therapy." A civil action instituted by reason of his death has been settled, and the matter is now under review by the Health Disciplines Board.

On March 24, 1981, a paediatric nurse was charged with the murder of four infant patients. The alleged victims of the homicide were Janice Estrella, who died on January 1, 1981; Kevin Pacsai on March 12, 1981; Allana Miller on March 21, 1981; and Justin Cook on March 22, 1981; all of whom died in the cardiac wards in the Hospital.

After a very lengthy preliminary hearing the learned Provincial Judge, pursuant to Reasons for Judgment delivered on May 21, 1982, was of the

opinion that, although there was sufficient evidence upon which a jury could conclude that the four patients named in the indictment died by reason of the intentional administration of an overdose of digoxin, there was insufficient evidence before him to commit the paediatric nurse for trial. The nurse was therefore discharged.

The circumstances surrounding the deaths of the four patients referred to in the indictment and others who died in the cardiac wards between July 1980 and March 1981 are still the subject matter of continuing and extensive police investigation, and civil actions have been instituted with respect to some of them. Of more recent date, an epidemiologic and scientific study of these deaths has been undertaken by the Center for Disease Control of Atlanta, Georgia, at the initiation of the Hospital and under the auspices of the Ministry of Health.

A patient in the neonatology ward, one Jonathon Murphy, died on January 25, 1982. This death also resulted in an inquest in which the coroner's jury concluded that the infant died "as a result of the accidental administration of epinephrine through the naso gastric tube."

It is the accumulation of those incidents, although unrelated, which has tested the confidence of some members of the public in the Hospital and resulted in the appointment of this Review Committee by Order in Council, dated June 3, 1982. We set out hereunder the Terms of Reference:

> THEREFORE the following persons, namely:
>
> The Honourable Mr. Justice Charles Leonard Dubin of Toronto;
>
> Henry Nadler, M.D., of Detroit, Michigan;
>
> Hugh McDonald, M.D., D.H.A., of Vancouver; and
>
> Joan Gilchrist, R.N., M.Sc. (Applied), B.N., of Montreal,
>
> be appointed under section 7a of the Public Hospitals Act to inquire into, investigate, and report to the Minister of Health (including interim reports as they deem expedient) on the quality of the management and administration of the Hospital and the quality of the care and treatment of the patients in the Hospital, with specific reference to whether the Hospital has instituted appropriate patient care practices and procedures to protect the safety and security of its patients;

and that they report to the Minister of Health immediately whenever they ascertain that the practices and procedures in respect of any particular aspect of patient care are inadequate or insufficient to protect the safety and security of the patients;

and that for these purposes they give priority to aspects of patient care which arise out of

(a) The Reasons for Judgment of His Honour Judge David Vanek; given on May 21, 1982, in Her Majesty the Queen vs. Susan Nelles; and

(b) the verdict of the coroner's jury in the Inquest into the death of Jonathan Murphy given on May 28, 1982.

You will note the broad Terms of Reference. In addition to the specific matters referred to, the Terms of Reference encompass the quality of the care and treatment of patients with respect to all the various services throughout the Hospital, and the quality of the management and administration of the Hospital at large.

The Terms of Reference directed us to inquire into the present state of the quality of patient care, the practices and procedures currently in place to protect the safety and security of its patients, and the present quality of the management and administration of the Hospital. Our focus was on the present and the future.

The Committee only looked at the past to test the adequacy of the practices and procedures then in place as they related to the quality of patient care and the protection of the safety and security of the patients. We also reviewed the adequacy of the many changes in those practices and procedures which were recently put in place. Our mandate did not invite us to inquire into the cause of the deaths of those patients whose deaths are the subject matter of the criminal investigation, of the pending civil actions and of the study by the Center for Disease Control. We did, however, inquire as to the information available to the Hospital at the time of those deaths to test the adequacy of the Hospital's response.

Our authority was pursuant to section 7a of the Public Hospitals Act. This is a new provision enacted in 1981. That section of the statute and the regulations enacted pursuant to the Public Hospitals Act empowered the Committee to have complete access to all hospital records and imposed a statutory duty on all those in the Hospital to provide to the Committee all information in their possession relating to our Terms of Reference which

the Committee sought. The relevant statutory authority pursuant to which we acted does not provide for a public hearing, nor does it authorize the Committee to compel witnesses to testify under oath.

In light of what had transpired in the past in the Division of Cardiology at the Hospital and the concern expressed, the Committee gave priority to an examination in detail of the medical records of all the patients in the Hospital who had been admitted as a result of a cardiac ailment and who died after March 22, 1981. This review related to all such patients wherever they may have died in the Hospital and was not confined to the cardiac wards. In addition, a careful review was initiated of all the laboratory results relating to the administration of digoxin in the Hospital, including a review of the digoxin levels obtained in post-mortem examinations as well as those of cardiac patients under treatment.

The Committee met with and interviewed surgeons, physicians, fellows, residents, interns, registered nurses and registered nursing assistants who are responsible for the care of patients with cardiac ailments.

The Committee then turned its attention to the death of Jonathon Murphy and, in particular, to the verdict of the coroner's jury at the inquest held into his death. This led us into the much broader issue of the administration of medication throughout the Hospital, which became a special and significant study. It also resulted in a very close examination of the quality of patient care in the neonatology wards; neonatology being one of the most critical and important services in the tertiary care duties at the Hospital.

The consideration of the coroner's verdict in the Steven Yuz case, amongst other matters, highlighted the difficulty of determining who was the physician in charge of a particular patient in the Hospital, an issue which frequently arises in university teaching hospitals.

After first giving priority to the specific matters referred to in the Terms of Reference, the Committee endeavoured to inquire into all the departments and divisions of the Hospital, the quality of the patient care in those departments and divisions, the procedures in place for the protection of the safety and security of the patients, as well as the quality of the management and administration of the Hospital as a whole.

Members of the Committee attended at the various service areas of the Hospital and sought for and obtained medical records of patients throughout the Hospital on a spot-check basis.

As a result of the examination of the Hospital's records, the Committee requested interviews with all those in the Hospital who we felt could be of some assistance. Every member of the Committee, other than the Chairman, has special expertise in the subject matters referred to in our Terms of Reference. Not all members of the Committee were present at every interview, but an effort was made to be certain that the members of the Committee with special expertise were present at interviews which fell within the areas of their particular knowledge. All information obtained was pooled and reviewed by the Committee.

In an endeavour to obtain the assistance of those in the Hospital who had not been requested to attend before us, a Notice was posted in the Hospital inviting anyone who had information which could be of assistance to the Committee to communicate with us. Although those invited to attend freely did so, the Committee was somewhat discouraged by the lack of response to our Notice. As a result, in an effort to get as broad a response as possible, Counsel for the Committee communicated by letter with almost all members of the staff seeking their assistance. The response to that letter was most encouraging. Many came forward and gave the Committee a broader perspective of the issues. We did not place a cut-off date for hearing anybody who could possibly be of some assistance, and our interviews with those who came forward continued until December 3, 1982. Although this delayed the delivery of our Report, we think such delay was worthwhile.

The procedure adopted was an informal one. There is a natural reticence to be critical of one's colleagues or superiors. We think that the informal procedure adopted, with the assurances given of confidentiality as to the source of information, eliminated most, if not all, of such inhibitions. For the most part we had a free and frank discussion with all those with whom we met. Having regard to the Terms of Reference, we did not feel in any way handicapped by our inability to compel testimony under oath.

In an effort to seek out assistance from those outside the Hospital who may have had knowledge of the quality of patient care, the Committee published a Notice in 44 daily newspapers throughout the Province, a copy of which is

attached as Schedule "A". To a similar effect, radio broadcasts were made over 138 radio stations in Ontario, and a copy of the radio announcement is attached as Schedule "B". All responses were considered and reviewed by Committee Counsel. In every case in which we thought that the information might be helpful, an interview was arranged and conducted with those members of the public who had communicated with us.

The legislation governing the Hospital was reviewed, as were the Hospital organization, by-laws and committee structure. A comparison of the practices and procedures at the Hospital for Sick Children was made with other hospitals which we thought were somewhat comparable.

The Committee received complete co-operation from the Board of the Hospital and its administrative officers. All documents asked for were readily provided. All those who had significant administrative responsibilities were interviewed as well as selected members of the Board of Trustees.

In almost all our interviews and from an examination of the Hospital's minutes and records, we sensed a determination to provide the highest quality of patient care services, and the institution of practices and procedures designed to ensure the safety of its patients.

We are satisfied that the very appointment of the Committee, and the full and frank discussions which we had, made all those who have the responsibility for the care and safety of the patients in the Hospital more aware of some of those areas where problems exist and more alert in dealing with them than would have been the case if the Committee had not been appointed.

The Committee was assured by the Chairman of the Board that any recommendations for improvement would be welcome and, indeed, changes in procedures were being implemented and others being considered during the period that the review was being conducted.

Apart from the extensive examination of medical records, laboratory results, minutes of the Hospital Board and Hospital committee meetings, studies previously undertaken by the Hospital into matters which are included in our Terms of Reference, and statistical analyses, the Committee met with and interviewed at length over 125 members of the staff at the Hospital, with several and repeated follow-up interviews, as well as

approximately 20 health care specialists from outside the Hospital in Canada and the United States. We also reviewed over 70 submissions made by the public, with attendant interviews in some cases, over a period from July 16, 1982, until December 3, 1982.

We have not endeavoured to set forth in this Report in detail all the information amassed by us in what we hope was a careful and penetrating review. To do so would be too time-consuming and counter-productive. However, in arriving at our conclusions and recommendations, we have endeavoured to give careful consideration to everything which was put before us. For the purpose of the Report itself, however, we contented ourselves with making reference to only what we believe to be the most essential information provided to us and which formed the basis of our conclusions and recommendations.

We would be remiss if we failed to acknowledge the assistance given to us by the staff of our Committee. It was a very small staff, which imposed very onerous and heavy responsibilities on each person.

Shortly after the appointment of the Committee, we were fortunate in obtaining the services of Miss Juta Auksi as our Executive Director. She immediately took charge of all the administrative details, set up our office, assisted in the co-ordination of the work of the Committee and took charge of the massive quantity of information provided to the Committee. She was also responsible for the co-ordination of our draft report into its final form.

She was assisted by Mrs. Tobi Jaffe and Miss Cynthia Taylor, our two secretaries, who provided loyal and industrious assistance to our work, and Mrs. Carroll Brooks, whose task was to complete the Report on a word processing machine in its final form. We are also indebted to Mrs. Carolyn Sherk for her research assistance in the early days of our study.

By a stroke of good fortune, we were able to obtain the services of Mrs. Felice Guberman, a young lawyer with a background in medical jurisprudence as Counsel to the Committee. She organized the interviews, many of which were conducted by her, analyzed all the information amassed by the Committee and provided important research assistance. All those who met with her commented very favourably to the Committee as to her ability,

Metropolitan Toronto since 1962 with an increased number of paediatric beds in use. Thus, notwithstanding a reduction in the birth rate, there was a decentralization of paediatric services throughout the Metropolitan area.

During the same period there were also changes in the city core. With the decreased need for paediatrics in the downtown hospitals, many hospitals in the downtown core de-emphasized or closed their paediatric services. However, in the same period, a large number of new Canadians settled there, and their children required general paediatric care. For them Sick Children's Hospital became the neighbourhood downtown hospital, and it was necessary for the Hospital for Sick Children to provide the gambit of paediatric services. Thus, the Hospital could not limit its activities to secondary or tertiary care with respect to which it had special expertise.

From its early days the Hospital for Sick Children combined basic and clinical research with therapeutic treatment. The Hospital was constantly introducing new methods of treatment and new procedures for illnesses that, within the limitations of previous medical knowledge, could not be treated in an effective manner. These advances have been contributed to by the results of research conducted at the Hospital. Patients who would have had little or no chance of survival as recently as five or ten years ago are now often afforded a new lease on life. The value of the Hospital's interest in research has been amply demonstrated by its major advances in the fields of nutrition, neonatal medicine, cardiac and orthopaedic surgery, cystic fibrosis, haematology and oncology, amongst others.

In addition, the Hospital has played a major role in the formal educational process through the cross-appointment of its medical staff to the University of Toronto Medical School and the rotation of all medical students through the Hospital. The Hospital is the major institution affiliated with the University of Toronto providing paediatric training. As a consequence, the Department of Paediatrics must provide clinical training and experience for a broad range of medical students in their third and fourth years as well as for family practice trainees and rotating interns. On a wider scale, the Hospital has seen its responsibility as advancing the specialty of paediatrics in the training of medical students, including students from other countries. Thus, the Hospital has the largest paediatric training program in this country. In some areas, such as paediatric gastroenterology, nutrition, infectious diseases and clinical

pharmacology, it has the only complete subspecialty program in the country. In others, like cardiology, neurology and respiratory diseases, it provides a major service for paediatric subspecialty training. The carrying out of the teaching responsibility has also made it necessary to have a wide range of medical conditions being treated.

The Hospital's role in teaching and research has enabled it to attract some of the world's most highly regarded paediatric physicians and surgeons and has placed it in the forefront of advancement in medical technology, preventive medicine and research.

Patients are referred to the Hospital for Sick Children from all other hospitals in Metropolitan Toronto, from other areas of Canada and from the United States where, because the medical resources and skills are more limited, the risk to the patient undergoing medical treatment would be even higher than at the Hospital for Sick Children. The Hospital is called upon to endeavour to treat patients who are considered to be poor medical risks and for whom established treatment offers little or no hope.

The success of the Hospital in some of these cases has heightened the expectations of parents and has added to the strain on those responsible for patient care. Because of the emphasis on tertiary care, there is, as must be expected, a high incidence of deaths, which often drains the staff emotionally as well as the parents of those children who are not able to survive.

In addition to the medical and surgical services provided, the Hospital has developed a rehabilitation program providing audiology, physiotherapy, occupational therapy and speech therapy services. Mental health services are available for children, adolescents, and their families, on an in-patient and out-patient basis. Other specialized services include a dialysis unit, a neonatal intensive care unit, and the recently opened paediatric oncology unit.

To promote the health of children throughout the province, the Hospital is also gradually developing a system of outreach by which community hospitals could provide more services locally with the support of the specialized skills of the Hospital and its staff. It is hoped that this will provide better paediatric services in outlying areas with less inconvenience to

parents and patients, rather than centralizing more paediatric services at the Hospital itself.

From its early beginning as a home for sick children to its present stature as the major teaching and referral hospital in paediatrics in Canada, the Hospital's philosophy has had three elements:

1) To provide the best medical services, including patient care, training and research;

2) To meet the needs of the immediate community in the full range of child health services;

3) To make available to any child, regardless of place of residence, the services, skilled staff and resources of the Hospital.

With the emphasis on tertiary care, teaching and research, and as the paediatric community hospital for the core of the city, accompanied by its open door policy whereby no one is refused admission, the Hospital has become all things for all people. This has strained the facilities, the manpower and the financial resources of the Hospital. The physical plant is limited in its capacity and design, and plans are underway for an expansion.

In 1981-82, over 23,000 patients were admitted to the Hospital's 698 set-up beds, and a further 250,000 visits were made to the Out-Patient and Emergency Departments. Sixty percent of the children who were admitted lived in Metropolitan Toronto, 38% were from other centres in Ontario, and almost 600 came from other provinces, the United States and other countries. Over the last decade, patients from Metropolitan Toronto have declined as a percentage of the total, as the child population of Toronto has declined and more referrals for tertiary care services are made from other areas, particularly from the counties of Peel, Halton, Simcoe and Durham in the South and from Northern Ontario.

Over the past five years, the number of admissions has declined almost 13%, but the number of out-patient visits and day surgery has increased substantially (21% and 48% respectively). The statistical summary below indicates the changing patterns of service. Although the number of

operating room procedures has not changed according to these statistics, it is important to note that the average time per operation has increased from 51 minutes in the late 1960s to 82 minutes in 1979--80, an indication of the more complicated procedures now undertaken. Set out hereunder is the statistical summary setting forth a comparison of certain activities of the Hospital as between 1975 and 1981-82:

TABLE 1

Services	Statistical Summary		
	1975	1981-82	% Change 1975-81
Admissions	26,627	23,096	(13.3)
Patient Days	212,549	185,276	(12.8)
% Occupancy	75.0%	72.7%	(3.1)
Average Days of Stay	7.9	7.9	---
Outpatient Visits	179,788	218,056	21.3
Emergency Visits	46,987	39,758	(15.4)
O.R. Procedures (inpatient)	13,391	13,358	(0.3)
Day Surgery	3,564	5,288	48.4
Radiology Procedures	91,193	97,249	6.6
Laboratory Tests	1,656,991	2,231,367	34.7

From Annual Reports: Facts and Figures.

To provide this range of services to patients, the Hospital has over 400 medical staff, 240 house staff (fellows, residents and interns) and approximately 2,800 hospital employees, including 1,133 nursing staff.

The operating budget for the Hospital is approaching $100 million. The equipment and building are valued at $60 million (cost less depreciation), but capital requirements are under review in light of the plans for rebuilding and expansion.

The quality of the patient care provided by the medical and nursing staff is, in large measure, very much dependent on the support services, such as Pharmacy and Central Supply. The significant change in medicine over the last decade has certainly been exemplified at the Hospital for Sick Children. With the recruitment of a new Chief of Surgery and a new Chief of Paediatrics in the mid-1970s, there has been an increasing subspecialization within the Hospital with a major growth in the number of divisions and programs within it. There is much more complex interaction among, and demand upon, the support services. Up until recent years, by and large, this Hospital added medical programs without sufficient planning to anticipate the impact that these new programs would have on the support services. Areas in which this is readily apparent are the neonatal units and the Haematology and Oncology programs, which place enormous burdens on the nursing services and present major problems for the pharmacy. The failure to give sufficient consideration to the demands which these new programs create for Nursing and the support services has caused some of the present problems within the Hospital.

With all the activities in the Hospital there are competing demands for patient care, for teaching, for research and for support services. The prime concern must always be that of patient care. It is the proper allocation of personnel, facilities and funds to promote the highest quality of patient care services which is the major challenge for the Board of Trustees, in whose hands lies the ultimate responsibility for the quality of patient care and the management of the Hospital.

Chapter II

Ontario Provincial Legislation

Part I

PUBLIC HOSPITALS ACT

R.S.O. 1980, Chapter 410, as amended by 1981, Chapter 25.

The governing of the Hospital is subject to the provisions of the Public Hospitals Act and the regulations promulgated thereunder. The relevant provisions are set forth hereunder:

1. In this Act,

(a) "administrator" means the person who has for the time being the direct and actual superintendence and charge of a hospital;

(b) "Appeal Board" means the Hospital Appeal Board;

(c) "board" means the board of directors, governors, trustees, commission or other governing body or authority of a hospital;

. . . . .

(e) "hospital" means any institution, building or other premises or place established for the treatment of persons afflicted with or suffering from sickness, disease or injury, or for the treatment of convalescent or chronically ill persons that is approved under this Act as a public hospital;

(f) "inspector" means an officer of the Ministry designated under this Act as an inspector;

(g) "medical advisory committee" means a committee established under section 32;

(h) "medical department" means a division of the medical staff of a hospital for the provision of a specified type of medical diagnosis or treatment;

(i) "Minister" means the Minister of Health;

(j) "Ministry" means the Ministry of Health;

. . . . .

(l) "out-patient" means a person who is received in a hospital for examination or treatment or both, but who is not admitted as a patient;

(m) "patient" means a person received and lodged in a hospital for the purpose of treatment;

(n) "physician" means a legally qualified medical practitioner;

. . . . .

(s) "treatment" means the maintenance, observation, medical care and supervision ans skilled nursing care of a patient and, if dental service is made available in a hospital by its board, includes the dental care and supervision of the patient;

. . . . .

3. The Minister shall administer and enforce this Act and the regulations. R.S.O. 1980, c.410, s.3.

. . . . .

7. Every hospital has power to carry on its undertaking as may be authorized by any general or special Act under which it was created, established, incorporated or empowered so to do. R.S.O. 1980, c.410, s.7.

7a. (1) The Lieutenant Governor in Council may appoint one or more persons to investigate and report on the quality of the management and administration of a hospital and the quality of the care and treatment of patients in the hospital.

(2) An investigator has the powers of an inspector under this Act and the regulations.

(3) No person shall obstruct an investigator or withhold or destroy, conceal or refuse to furnish any information or thing required by the investigator for the purposes of the investigation.

(4) The Minister shall cause a copy of the report of an investigation to be delivered to the chairman of the board of the hospital. 1981, c.25, s.1, part.

. . . . .

9. (1) A hospital shall pass by-laws as prescribed by the regulations, subject to the approval of the Minister.

(2) A hospital shall pass, amend or revise its by-laws and submit them to the Minister after receiving notice to do so as prescribed by the regulations.

(3) No by-laws, or amendment to or revision of a by-law, made under subsection (2) has any force or effect until it is approved by the Lieutenant Governor in Council upon the recommendation of the Minister.

(4) Notwithstanding the Corporations Act, a hospital may provide by by-law for the election and retirement of directors in rotation, but in that case no director shall be elected for a term of more than five years and at least four directors shall retire from office each year.

(5) Notwithstanding the Corporations Act, a hospital may provide by by-law for the appointment by its board, in recognition of contributions or of long or special services to the hospital considered worthy of such appointment, of life directors, term directors and honorary directors.

(6) A life director may attend meetings of the board during his lifetime and vote in person but not by proxy thereat, and the number of life directors at any time shall not exceed the number of elected and ex officio directors.

(7) A term director may attend meetings of the board for a term not exceeding ten years as specified in the by-law and vote in person but not by proxy thereat.

(8) An honorary director may attend meetings of the board and may act in an advisory capacity without the right to vote or may vote in person but not by proxy as determined by the by-law.

(9) The by-law may provide for the appointment of members or retired members of the medical, dental, nursing or administrative staffs of the hospital as honorary directors of the hospital.

(10) The number of honorary directors with the right to vote at board meetings plus the number of term directors at any time shall not exceed the number of elected and ex officio directors.

(11) Notwithstanding the Corporations Act, upon the recommendation of the Minister, the Lieutenant Governor in Council may appoint one or more provincial hospital representatives to the board of a hospital for a term of office of not more than three years and such provincial hospital representatives shall have all the rights and responsibilities of elected directors. R.S.O. 1980, c.410, s.9.

. . . . .

17. Where,

(a) a person has been admitted to a hospital by a physician pursuant to the regulations; and

(b) such person requires the level or type of hospital care for which the hospital is approved by the regulations, the hospital shall accept such person as a patient. R.S.O. 1980, c.410, s.17.

18. Nothing in this Act requires any hospital to admit as a patient,

(a) any person who is not a resident or a dependant of a resident of Ontario, unless by refusal of admission life would thereby be endangered; or

(b) any person who merely requires custodial care. R.S.O. 1980, c.410, s.18.

. . . . .

20. Subject to any existing agreement relating thereto, every hospital receiving provincial aid shall provide such facilities as the regulations require for dental students, student dietitians, medical students and interns, students of nursing, student laboratory technicians, student physiotherapists, student occupational therapists, student X-ray technicians and student social workers. R.S.O. 1980, c.410, s.20.

21. No person shall be employed as an intern in a hospital unless he is registered under Part III of the Health Disciplines Act. R.S.O. 1980, c.410, s.21.

. . . . .

29. (1) Subject to the approval of the Lieutenant Governor in Council, the Minister may make such regulations with respect to hospitals as are considered necessary for,

. . . . .

(e) prescribing the powers and duties of inspectors;

(f) providing that certain persons shall be by virtue of their office members of the board in addition to the members of the board appointed or elected in accordance with the authority whereby the hospital is established;

(g) their administrators, staffs, officers, servants and employees and the powers and duties thereof;

. . . . .

(j) the admission, treatment, care, conduct, control and discharge of patients or any class of patients;

(k) prescribing the organization of the medical staff of a hospital including the composition and duties of admission and discharge committees and other committees of the medical staff;

. . . . .

31. (2) Where the medical staff of a hospital is divided into medical departments, the head of each department may be made responsible by by-law of the hospital, through and with the chief of the medical staff or, where there is no chief, through and with the president of the medical staff, to advise the medical advisory committee with respect to the quality of medical diagnosis, care and treatment provided to the patients and out-patients of his department.

(3) Where an officer of the medical staff who is responsible under subsection (1) or (2) becomes aware that, in his opinion, a serious problem exists in the diagnosis, care or treatment of a patient or out-patient, he shall forthwith discuss the condition, diagnosis, care and treatment of the patient or out-patient with the attending physician, and, if changes in diagnosis, care or treatment satisfactory to him are not made promptly, he shall assume forthwith the duty of investigating, diagnosing, prescribing for and treating the patient or out-patient, as the case may be, and shall notify the attending physician, the administrator, and, if possible, the patient or out-patient that the member of the medical staff who was in attendance will cease forthwith to have any hospital privileges as the attending physician for the patient or out-patient.

(4) Where the officer of the medical staff who is responsible under this section is unable to discuss the problem with the attending physician as required by subsection (3), he shall proceed with his duties as prescribed in this section as if he had had the discussion with the attending physician.

(5) The officer of the medical staff who is responsible under this section shall inform two members of the medical advisory committee within twenty-four hours of his action under subsection (3) or (4) and shall file a written report with the secretary of the medical advisory committee within forty-eight hours of his action under subsection (3) or (4).

(6) The officer of the medical staff who is responsible under this section may delegate any or all of his responsibilities and duties under this section to a member of his medical staff or of his medical department, as the case may be, but he remains accountable to the medical advisory committee for the management of the patient by that member of the medical staff to whom any such responsibility or duty is delegated.

(7) Where the medical advisory committee concurs in the opinion of the officer of the medical staff who has taken action under subsection (3) or (4) that the action was necessary, the secretary of the medical advisory committee shall forthwith make a detailed written report to the administrator of the problem and the action taken. R.S.O. 1980, c.410, s.31.

32. (1) Every board shall establish a medical advisory committee composed of such elected and appointed members of the medical staff as are prescribed by the regulations.

(2) The medical advisory committee shall consider and make recommendations to the board respecting any matter referred to it under section 34 and perform such other duties as are assigned to it by or under this or any other Act or by the board. R.S.O. 1980, c.410, s.32.

. . . . .

REGULATIONS UNDER THE PUBLIC HOSPITALS ACT

Regulation 863 (Classification of Hospitals)

1. (1) Hospitals are classified as general hospitals, convalescent hospitals, hospitals for chronic patients, active treatment teaching psychiatric hospitals, active treatment hospitals for alcoholism and drug addiction and regional rehabilitation hospitals, and are graded as,

(a) Group A hospitals, being general hospitals providing facilities for giving instruction to medical students of any university, as evidenced by a written agreement between the hospital and the university with which it is affiliated, and hospitals approved in writing by the Royal College of Physicians and Surgeons for providing post-graduate education leading to certification or a fellowship in one or more of the specialties recognized by the Royal College of Physicians and Surgeons;

. . . . .

Regulation 865 (Hospital Management)

1. In this Regulation,

. . . . .

(c) "attending physician" means a medical practitioner who attends a patient in the hospital;

. . . . .

(f) "consultant medical staff" means members of the medical staff who are appointed by the board to act as consultants;

. . . . .

(l) "medical practitioner" means a legally qualified medical practitioner;

(m) "medical staff" means the medical practitioners to whom the board has granted the privilege of diagnosing, prescribing for and treating patients in the hospital;

(n) "neonatal death" means the death of a child before the end of the twenty-eighth day after birth;

. . . . .

(p) "president" means the president of the medical staff;

(q) "secretary" means the secretary of the medical staff;

. . . . .

(s) "surgeon" means a member of the medical staff who performs a surgical operation on a patient; and

(t) "vice-president" means the vice-president of the medical staff. R.R.O. 1970, Reg. 729, s.1.

. . . . .

2. (2) The president is a member of the board with all rights and responsibilities of a board member.

(3) Where a hospital has 100 beds or more,

(a) the president and vice-president; and

(b) one of,

(i) the chief of the medical staff,

(ii) the secretary of the medical staff,

(iii) the chairman of the medical advisory committee, or

(iv) the vice-chairman of the medical advisory committee,

as provided for by a by-law that may be passed by the board after consideration of a recommendation from the medical staff,

are members of the board with all the rights and responsibilities of a board member.

(4) A medical staff officer entitled to a membership on the board under this section shall be in addition to the number of board members provided by or in accordance with the provisions of the authority under which the hospital is created, established or incorporated and shall not replace elected, appointed or ex officio members of the board. R.R.O. 1970, Reg. 729, s.2.

3. The board is responsible for the enforcement of the Act, this Regulation and the by-laws of the hospital. R.R.O. 1970, Reg. 729, s.3.

4. The board shall,

(a) develop an accident prevention policy;

(b) ensure the establishment of procedures designed to encourage,

(i) a safe work environment,

(ii) safe work practices, and

(iii) the prevention of accidents to patients, employees, professional staff and visitors;

(c) provide for the appointment of an accident prevention committee, the composition of which shall include a representative from each of the following groups,

(i) the administrative staff,

(ii) the medical staff,

(iii) the nursing staff, and

(iv) employees to whom the Labour Relations Act applies; and

(d) ensure that the accident prevention committee,

(i) meets at least once every three months,

(ii) reports to the board on the deliberations of each committee meeting, and

(iii) makes recommendations to the board concerning implementation of the accident prevention policy. O. Reg. 934/76, s.1.

5. The administrator is responsible to the board for the due observance and enforcement of the Act, this Regulation and the by-laws of the hospital. R.R.O. 1970, Reg. 729, s.4.

6. The administrator is the officer representing the hospital with whom the Minister and an inspector shall deal in respect of hospital matters. R.R.O. 1970, Reg. 729, s.5.

7. (1) The board shall pass by-laws that provide for,

(a) the appointment and functioning of,

(i) an administrator,

(ii) a medical staff, and

(iii) a person licensed under the Public Accountancy Act as an auditor;

(b) in each Group A hospital, the appointment and functioning of a medical advisory committee which shall include the president, vice-president and secretary of the medical staff and the chief of the dental staff and shall be constituted in accordance with provisions in the agreement between the hospital and the university with which it is affiliated;

. . . . .

(e) the appointment of members of the medical staff, on the recommendation of the medical staff or the election of such members by the medical staff, to,

(i) a credentials committee,

(ii) a records committee,

and, where there are ten or more members on the active medical staff,

(iii) a therapeutic abortion committee, where therapeutic abortions are to be performed,

(iv) an admission and discharge committee, and

(v) except in hospitals for convalescent persons and hospitals for chronically ill persons, a tissue committee or a medical audit and tissue committee,

and that prescribe the duties and powers of such committees;

(f) the method of determining the professional privileges granted to each member of the medical staff;

(g) the establishment and functioning of an administrative and accounting system. R.R.O. 1970, Reg. 729, s.6(1); O. Reg. 170/72, .1(1); O. Reg. 247/72, s.1; O. Reg. 100/74, s.1.

. . . . .

(6) The by-laws shall provide that the medical advisory committee shall,

(a) make recommendations to the board concerning,

(i) every application for appointment or reappointment to the medical staff and to the dental staff, where there is a dental staff,

(ii) the hospital privileges to be granted to each member of the medical staff,

(iii) the hospital privileges to be granted to each member of the dental staff, where there is a dental staff,

(iv) by-laws respecting the medical staff and the dental staff, where there is a dental staff,

(v) rules respecting the medical staff and the dental staff, where there is a dental staff,

(vi) the dismissal, supension or restriction of hospital privileges of any member of the medical staff or the dental staff who contravenes any provisions of the by-laws, the Public Hospital Act, the Health Insurance Act or the regulations made under those Acts, and

(vii) the quality of medical care provided in the hospital;

(b) provide supervision over the practice of medicine in the hospital; and

(c) advise the board on any matter referred to it by the board. R.R.O. 1970, Reg. 729, s.6(3-6).

. . . . .

11. An inspector may,

(a) administer and enforce this Act and the regulations in a hospital;

(b) inspect and inquire with respect to the premises, management and operation of a hospital;

(c) require the administrator, a member of the medical staff or a hospital employee,

(i) to furnish any information in his possession or under his control, and

(ii) to make returns, reports or statements in writing,

relating to the hospital but only for the purpose of the Act and this Regulation;

(d) examine and audit all hospital books, accounts and records; and

(e) investigate and require information from a person in possession of information in respect of any hospital matter or the financial condition of a patient. R.R.O. 1970, Reg. 729, s.10.

12. The board shall permit an inspector,

(a) to examine and audit all hospital books, accounts and records; and

(b) to inspect or receive information from any book or record relating to the patients,

at any time, but only for the purpose of the Act and this Regulation. R.R.O. 1970, Reg. 729, s.11.

. . . . .

16. (1) Subject to subsection (2), a hospital shall have on duty at all times sufficient nursing staff to give such nursing care to every patient in the hospital as is required for the patients' care and treatment.

(2) A hospital shall have on duty,

(a) during the period from midnight until 8 o'clock in the forenoon, at least one registered nurse for each fifty patients or fraction thereof; and

(b) during the period from 8 o'clock in the forenoon until midnight, at least one registered nurse for each thirty-five patients or fraction thereof. R.R.O. 1970, Reg. 720, s.16.

. . . . .

22. (5) Notwithstanding subsections (1), (2) and (3), in a Group A hospital,

(a) the medical staff shall hold at least one meeting in each fiscal year, which shall be the annual meeting;

(b) the medical advisory committee shall meet monthly to consider medical staff affairs, including reports of all committees of the medical staff;

(c) the medical advisory committee shall report its proceedings to the medical staff at least once in each fiscal year and to the board at least six times in each fiscal year; and

(d) the medical staff in each department of the hospital shall hold at least ten monthly departmental meetings in each fiscal year. R.R.O. 1970, Reg. 729, s.22.

. . . . .

24. (1) The medical advisory committee shall appoint annually a member of the medical staff as physician in charge of the obstetrical nursery.

(2) The administrator shall send to the Minister the name of the physician in charge of the obstetrical nursery, within one week after his appointment.

(3) The physician in charge of the nursery shall report to the Minister and to the administrator, within twenty-four hours after the appearance, any signs and symptoms that indicate that a baby in the nursery has a communicable disease or infection. R.R.O. 1970, Reg. 729, s.24.

. . . . .

34. (1) A surgeon shall not dispose of any tissues removed from a patient during an operation or curettage.

(2) Subject to subsection (3), the administrator shall send the tissues removed, together with a short history of the case and a statement of the findings at the operation, to a laboratory for an examination and report.

(3) Where the tissue removed is an arm, finger, foot, hand, hemorrhoid, leg, prepuce, tonsil, toe or tooth, the tissue shall not be sent to a laboratory unless the surgeon desires an examination and report.

(4) A report, if any, of a pathologist shall be included in the medical record of the patient that is prescribed by section 38. R.R.O. 1970, Reg. 729, s.35.

. . . . .

36. (1) All orders for treatment shall be,

(a) in writing and signed by the attending physician or attending dentist on a paper attached to the medical record of the patient or in a book designated for physicians' orders; and

(b) dated and signed by the attending physician or attending dentist or by a medical practitioner authorized by the attending physician or a dentist authorized by the attending dentist,

but an attending physician or a medical practitioner authorized by him or an attending dentist or a dentist authorized by him, may dictate by telephone orders for treatment to a person designated by the administrator to take such orders.

(2) The person to whom an order for treatment has been dictated shall transcribe and sign it and endorse thereon the name of the medical practitioner or dentist who dictated the order and the date and time of receiving the order.

(3) When a medical practitioner or dentist has dictated an order by telephone, he shall sign the order on his first visit to the hospital thereafter. R.R.O. 1970, Reg. 729, s.36.

37. (1) Within seventy-two hours after the admission of a patient, the board shall cause a medical practitioner to,

(a) write a medical history of the patient;

(b) make a physical examination of the patient and record his findings; and

(c) make and record a provisional diagnosis of the patient's condition. R.R.O. 1970, Reg. 729, s.37(1).

. . . . .

38. (1) The board shall cause to be compiled for each patient a medical record including,

(a) identification;

(b) history of present illness;

(c) history of previous illnesses;

(d) family history;

(e) provisional diagnosis;

(f) orders for treatment;

(g) progress notes;

(h) reports of,

(i) condition on discharge,

(ii) consultations,

(iii) follow-up care,

(iv) laboratory examinations,

(v) medical, surgical and obstetrical treatment, including renal dialysis treatment,

(vi) operations and anaesthesia,

(vii) physical examinations,

(viii) radiological examinations, and

(ix) post mortem examination, if any;

(i) final diagnosis; and

(j) death certificate. R.R.O. 1970, Reg. 729, s.38; O. Reg. 353/71, s.2.

(2) The medical record of a newborn infant may be made, kept, photographed and destroyed as a part of the medical record of the mother of the infant. O. Reg. 100/74, s.7.

. . . . .

41. When a medical practitioner performs a post mortem examination on the body of a patient, he shall make and sign a report of the examination and deliver it to the administrator. R.R.O. 1970, Reg. 729, s.41.

. . . . .

46. (1) Nurses' notes, charts showing temperature, blood pressure and respiration, sheets showing vital signs or fluid balance and other notes not made by a physician need not be photographed or retained as part of the medical record unless,

(a) a court action has been commenced and the administrator has been served with notice that such notes, charts and sheets may be required;

(b) such notes, charts and sheets contain information which indicates that the patient had suffered some misadventure in the hospital; or

(c) the medical record that should have been made by a physician or physicians is incomplete or inadequate in the opinion of the administrator or of the records committee of the hospital.

(2) Notes, charts and sheets required to be retained under subsection (1) shall be considered part of the medical record.

(3) Notes, charts and sheets not required to be retained under subsection (1) are not part of the medical record but shall be retained for five years from the date of discharge or death of the patient and may be destroyed thereafter by the administrator. R.R.O. 1970, Reg. 729, s.46.

. . . . .

49. (1) Subject to subsections (2), (3), (4) and (5), a board shall not permit any person to remove, inspect or receive information from a medical record.

(2) Subsection (1) does not apply to,

(a) a person with a process,

(i) issued in Ontario out of a court of record or any other court, and

(ii) ordering the removing of, the inspecting of or the receiving of information from a medical record; or

(b) an inspector.

(3) Notwithstanding subsection (1), a coroner or a legally qualified medical practitioner, magistrate or police officer so authorized in writing and directed by a coroner, may inspect and receive information from medical records and may reproduce and retain copies therefrom for the purposes of an inquest or to determine whether an inquest is necessary, where the coroner has,

(a) issued his warrant to take possession of the body;

(b) issued his warrant for an inquest; or

(c) attended at the hospital to view the body and make an investigation in accordance with the Coroners Act. R.R.O. 1970, Reg. 729, s.48(1-3)

. . . . .

61. When a stillbirth or neonatal death occurs in a hospital, the administrator shall complete and deliver a report in Form 4 to the Minister within twenty-four hours after the occurrence of the stillbirth or neonatal death. R.R.O. 1970, Reg. 729, s.58.

. . . . .

COMMENT

The Committee is satisfied that the Hospital's by-laws and organization comply with the mandatory provisions of the Public Hospitals Act and the regulations set forth above. However, it appears to the Committee that the intent of the Statute and the regulations is to give to the medical staff an important voice in the administration of the Hospital and in the responsibility for the quality of patient care, subject to the ultimate responsibility of the Board of Trustees. As will appear subsequently, the Committee is concerned as to whether in practice this has been achieved.

Part II

CORONERS ACT

R.S.O. 1980, Chapter 93.

10. (1) Every person who has reason to believe that a deceased person died,

(a) as a result of,

(i) violence,

(ii) misadventure,

(iii) negligence,

(iv) misconduct, or

(v) malpractice;

(b) by unfair means;

(c) during pregnancy or following pregnancy in circumstances that might reasonably be attributable thereto;

(d) suddenly and unexpectedly;

(e) from disease or sickness for which he was not treated by a legally qualified medical practitioner;

(f) from any cause other than disease; or

(g) under such circumstances as may require investigation,

shall immediately notify a coroner or a police officer of the facts and circumstances relating to the death, and where a police officer is notified he shall in turn immediately notify the coroner of such facts and circumstances. 1972, c.98, s.9(1).

. . . . .

11. No person who has reason to believe that a person died in any of the circumstances mentioned in section 10 shall interfere with or alter the body or its condition in any way until the coroner so directs by his warrant. 1972, c.98, s.10; 1974, c.103, s.4.

. . . . .

16. (6) No person shall knowingly,

(a) hinder, obstruct or interfere with or attempt to hinder, obstruct or interfere with; or

(b) furnish with false information or refuse or neglect to furnish information to,

a coroner in the performance of his duties or a person authorized by him in connection with an investigation. 1972, c.98, s.14(3-6).

. . . . .

28. (1) A coroner may at any time during an investigation or inquest issue his warrant for a post mortem examination of the body, an analysis of the blood, urine or contents of the stomach and intestines, or such other examination or analysis as the circumstances warrant. 1972, c.98, s.23(1).

(2) The person who performs the post mortem examination shall forthwith report his findings in writing only to the coroner who issued the warrant, the Crown Attorney, the regional

coroner and the Chief Coroner and the person who performs any other examination or analysis shall forthwith reports his findings in writing only to the coroner who issued the warrant, the person who performed the post mortem examination, the Crown attorney, the regional coroner and the Chief Coroner. 1978, c.38, s.13. [Emphasis added.]

. . . . .

55. Any person who contravenes section 10, 11, 13 or subsection 16(6) is guilty of an offence and on conviction is liable to a fine or not more than $1,000 or to imprisonment for a term of not more than six months, or to both. 1972, c.98, s.46.

COMMENT

Subsequently in this Report reference will be made as to whether the Hospital fully complied with the reporting provisions set forth in section 10 reproduced above.

However, one additional comment, we think, is appropriate here with respect to section 28 of the Statute also reproduced above.

It is to be noted that the Coroner is therein authorized by warrant to direct a post-mortem examination for his purposes. The Statute provides that under those circumstances the person who performs the post-mortem examination "shall forthwith report his findings in writing only to the coroner who issued the warrant." Following the incidents which occurred in the Cardiology Division from July 1980 to March 1981, subsequently discussed in detail, the Coroner requested the Department of Pathology within the Hospital to perform and have performed certain tests which related particularly to the taking of digoxin levels. Although no warrant for post-mortem examination, as is contemplated by section 28, appears to have been issued in these cases, the Department of Pathology, acting in the utmost good faith, conducted those tests as if section 28 were applicable, and the results were submitted only to the Coroner. Thus, the Hospital was denied what might have been very valuable information for its purposes. When this was brought to the attention of the Department of Pathology by the Committee, a review of the procedure was undertaken. However, even if a warrant for post-mortem examination is issued by a Coroner, it appears to the Committee that the information thereby obtained should at some stage be released to the Hospital's authorities. It is understandable that in such

circumstances the information should first be provided to the Coroner, but provision should be made that subsequently the pathologist should be permitted to submit all such information to the Hospital's authorities for its use.

Part III

THE HUMAN TISSUE GIFT ACT, 1971

S.O. 1971, Chapter 83.

4. (1) Any person who has attained the age of majority may consent,

(a) in a writing signed by him at any time; or

(b) orally in the presence of at least two witnesses during his last illness,

that his body or the part or parts thereof specified in the consent be used after his death for therapeutic purposes, medical education or scientific research.

(2) Notwithstanding subsection 1, a consent given by a person who had not attained the age of majority is valid for the purposes of this Act if the person who acted upon it has no reason to believe that the person who gave it had not attained the age of majority.

(3) Upon the death of a person who has given a consent under this section, the consent is binding and is full authority for the use of the body or the removal and use of the specified part or parts for the purpose specified, except that no person shall act upon a consent given under this section if he has reason to believe that it was subsequently withdrawn. 1971, c.83, s.4.

5. (1) Where a person of any age who has not given a consent under section 4 dies, or in the opinion of a physician is incapable of giving a consent by reason of injury or disease and his death is imminent,

(a) his spouse of any age; or

(b) if none or if his spouse is not readily available, any one of his children who has attained the age of majority; or

(c) if none or if none is readily available, either of his parents; or

(d) if none or if neither is readily available, any one of his brothers or sisters who has attained the age of majority; or

(e) if none or if none is readily available, any other of his next of kin who has attained the age of majority; or

(f) if none or if none is readily available, the person lawfully in possession of the body other than, where he died in hospital, the administrative head of the hospital,

may consent.

(g) in a writing signed by the spouse, relative or other person; or

(h) orally by the spouse, relative or other person in the presence of at least two witnesses; or

(i) by the telegraphic, recorded telephonic, or other recorded message of the spouse, relative or other person,

to the body or the part or parts thereof specified in the consent being used after death for therapeutic purposes, medical education or scientific research.

(2) No person shall give a consent under this section if he has reason to believe that the person who died or whose death is imminent would have objected thereto.

(3) Upon the death of a person in respect of whom a consent was given under this section the consent is binding and is, subject to section 6, full authority for the use of the body or for the removal and use of the specified part or parts for the purpose specified except that no person shall act on a consent given under this section if he has actual knowledge of an objection thereto by the person in respect of whom the consent was given or by a person of the same or closer relationship to the person in respect of whom the consent was given than the person who gave the consent.

(4) In subsection 1, "person lawfully in possession of the body" does not include,

(a) the supervising coroner or a coroner in possession of the body for the purposes of The Coroners Act;

(b) the Public Trustee in possession of the body for the purpose of its burial under The Crown Administration of Estates Act;

(c) an embalmer or funeral director in possession of the body for the purpose of its burial, cremation or other disposition; or

(d) the superintendent of a crematorium in possession of the body for the purpose of its cremation. 1971, c.83, s.5.

. . . . . .

9. No action or other proceeding for damages lies against any person for any act done in good faith and without negligence in the exercise or intended exercise of any authority conferred by this Act. 1971, c.83, s.9.

. . . . .

11. (1) Except where legally required, no person shall disclose or give to any other person any information or document whereby the identity of any person,

(a) who has given or refused to give a consent;

(b) with respect to whom a consent has been given; or

(c) into whose body tissue has been, is being or may be transplanted,

may become known publicly.

(2) Where the information or document disclosed or given pertains only to the person who disclosed or gave the information or document, subsection 1 does not apply. 1971, c.83, s.11.

. . . . .

13. Every person who knowingly contravenes any provision of this Act is guilty of an offence and on summary conviction is liable to a fine of not more than $1,000 or to imprisonment for a term of not more than six months, or to both. 1971, c.83, s.13.

COMMENT

The Human Tissue Gift Act, 1971 is made great use of in the Hospital for Sick Children, particularly for purposes of research, and the specimens obtained are vital for that purpose. Until recent date, however, the consent forms required by the Statute may not have been specific enough to fully comply with the statutory requirements. The Hospital has changed the form of consent which, in the view of the Committee, now fully complies with the provisions of the Statute.

Chapter III

The Management of the Hospital

Part I

THE HOSPITAL FOR SICK CHILDREN BY-LAWS, PART I

Subject to the Public Hospitals Act and its own Act of Incorporation, the Hospital for Sick Children is governed by its by-laws, the relevant provisions of which are set out hereunder:

ARTICLE II: The Board of Trustees

Section 1. Subject to the provisions of the Act of Incorporation, the number of Trustees on the Board is hereby established at a number not exceeding thirty. In addition, the President and Vice-President of the Medical Staff, the Chairman of the Medical Advisory Committee, the Executive Director and the President, The Hospital for Sick Children Women's Auxiliary, shall be ex-officio members of the Board. The remaining Trustees shall consist of such persons as are from time to time appointed by resolution of the Board after due notice as provided by the Act of Incorporation to hold such office, and subject to the rights of removal contained in the Act of Incorporation, they shall hold office until their successors are appointed.

Section 2. Subject to the provisions of the Act of Incorporation and the provisions of the Corporations Act, the Board shall have complete charge of the authority over the Corporation, its undertakings, its operation, and the direction of its affairs. The Board shall provide for the faithful and economical management of the Hospital and all other property belonging to the Corporation and shall see that such property is duly preserved and repaired and may sell, lease or otherwise dispose of such portions thereof and acquire such additions thereto as it may consider necessary, upon such terms and conditions as it may consider beneficial to the Hospital, subject to the provisions of the Act of Incorporation, The Public Hospitals Act and Regulations thereunder. The Board shall have the basic functions and responsibilities related to the quality of patient care, policy control, effectiveness of the Hospital administration, preservation of the financial integrity of the Hospital, appointment of Medical and professional staff, future planning, program selection and review, and

accountability of the Hospital to the public. The Board may also make such rules and regulations for the government of the Hospital and its officers as may be deemed expedient.

. . . . .

ARTICLE III: Meetings of the Board

Section 1. An Annual Meeting of the Board shall be held between April 1 and July 31 each year, at such time and place as the Board may determine.

The business to be transacted at the Annual Meeting of the Board shall include:

(a) Review of the minutes of the previous meeting;

(b) Review of reports of the Chairman of Trustee Committees;

(c) Appointment of the Executive Director, Secretary, Medical Staff, (naming Department Chiefs) and Research Institute Senior Staff, until the next annual meeting;

(d) Appointment of auditors to serve until the next annual meeting;

(e) Appointment of Trustee Committees, Medical Advisory Committee and Research Advisory Committee naming a Chairman and Vice-Chairman of each;

(f) Other reports and new business.

Section 2. The Board shall hold regular meetings in addition to the Annual Meeting, at such times and at such places as may be determined from time to time by resolution of the Board. In addition, special meetings of the Board shall be called by the Chairman, or by the Secretary as required, or where three or more Trustees so request in writing.

. . . . .

ARTICLE V: Officers

Section 1. The Trustees shall from time to time elect from their number a Chairman of the Board. The Chairman of the Board shall hold office for a period of five years. This term may be renewed by the Board for a further five years for a maximum term of office of ten years.

The Chairman of the Board shall:

(a) If present, preside at all meetings of the Board of Trustees;

(b) Appoint Trustees to Trustee Committees where vacancies occur, subject to ratification by the Board;

(c) Represent the Hospital at public or official functions;

(d) Be an ex-officio member of all Trustee Committees;

(e) Be a signatory of documents and letters of particular importance to the Hospital or the Corporation.

(f) Provide guidance in the policy goals of the Hospital;

(g) Perform such other duties as may be assigned to him from time to time by the Board.

Section 2. The Trustees shall from time to time elect from their number one or more Vice-Chairmen of the Board. A Vice-Chairman of the Board shall hold office for a period of five years. This term may be renewed by the Board for a further five years for a maximum term of office of ten years.

A Vice-Chairman shall:

(a) Have all the powers and perform the duties of the Chairman in the absence or disability of the Chairman, provided that if there is more than one Vice-Chairman, such powers and duties shall be performed by that one who shall be designated by the Board;

(b) Perform such other duties, if any, as may be assigned from time to time by the Board;

(c) Be an ex-officio member of all Trustee Committees;

(d) Assist the Chairman in the execution of his duties.

. . . . .

Section 4. The Trustees may from time to time appoint a Chairman of the Executive Committee for such terms as the Board may determine. The Chairman of the Executive Committee shall chair meetings of the Executive Committee, shall be an ex-officio member of all Trustee Committees and shall perform such other duties, if any, as may be assigned to him from time to time by the Board.

Section 5. The Trustees shall at their annual meeting appoint an Executive Director for such term as the Board shall determine. The Executive Director shall be an ex-officio member of the Board and be the Chief Administrative Officer of the Hospital and subject to the direction of the Board in all things, shall:

(a) Be the Administrator and Superintendent of the Hospital within the meaning of those terms as employed in the Public Hospitals Act and Regulations thereunder, exercise the authority and accept and carry out all such duties, obligations and functions of an administrator or superintendent of the Hospital as are prescribed for such officers respectively by the said Act and Regulations;

(b) Participate in the development of long range plans for the future of the Hospital;

(c) Develop policies for the operation of the Hospital and supervise the general administration, organization and management of the Hospital in accordance with these By-Laws, policies approved by the Board, and in accordance with the Public Hospitals Act and the Regulations thereunder and such other legislation applicable to Hospital operation as may be in force from time to time particularly to provide for:

(i) an annual physical examination of graduate Nurses, registered nursing assistants and orderlies,

(ii) a physical examination of each employee who handles food within seven days of the commencement of his employment and annually thereafter,

(iii) employees to report for a physical examination after an illness of such scope and duration as may be prescribed from time to time,

(iv) employees to have an intradermal tuberculin test, when not contra indicated and an X-ray of the chest within fourteen days of commencement of employment and annually thereafter,

(v) the issuance of fire and safety procedure and the inspection of equipments monthly;

(d) Recommend the appointment of senior members of the Administrative Staff and employ, control, direct and develop the potential of all employees of the Hospital;

(e) Be a member of senior medical staff Selection Committees and communicate the recommendations of such committees to the Board;

(f) Attend and be a member of the Medical Advisory Committee and the Research Advisory Committee and of such committees as may be designated by the Board from time to time;

(g) Attend or arrange the attendance of his representative at all meetings of the Board, and of Trustee Committees;

(h) Report to the Board any matter about which it should have knowledge;

(i) Report to the Chief of Service charged with the responsibility of clinical supervision as applicable, and to the Board if necessary;

(i) the failure of any physician to act in accordance with statute law or Hospital By-Laws or Regulations,

(ii) any patient who, in the opinion of the Chief of Nursing is not making a reasonable progress towards recovery or who is not being visited frequently enough by the attending physician or surgeon,

(iii) any other matter about which he or they should have knowledge;

(j) Report to the College of Physicians and Surgeons of Ontario any notice of Medical Staff privileges restrictions or cancellations.

. . . . .

Section 7. The Board may also from time to time appoint such other officers as may be necessary for the proper despatch of the business of the Corporation and may assign to them such duties as they see fit and may combine such offices and may remove such officers at pleasure.

. . . . .

ARTICLE VI: Delegation of Duties

Section 1. The Board may at any regular or special meeting delegate any of the powers of the Board to Committees consisting of such number of Trustees as they think fit. The regular Committees of the Board shall be:

(a) The Executive Committee

(b) The Finance Committee

(c) The Service, Education and Research Committee

(d) The Investment Committee

(e) The Program Committee

The Board may from time to time eliminate Committees or appoint such other Committees of such number and with such powers as may be set forth in the resolution appointing such Committees.

. . . . .

Section 4. The Executive Committee shall consist of not more than ten appointed members. The Chairman of the Board, Vice-Chairman of the Board and the Chairmen of all regular Trustee Committees shall be included in this number, and where the Chairman of any such Committee cannot attend any such meetings, the Vice-Chairman of each such Committee shall attend to present reports but not as a member of the Executive Committee.

The Executive Committee shall have and may exercise (subject to any regulations which the Board may make from time to time) all the powers of the Board in conducting the affairs of the Hospital within Board policies. The Executive Committee shall coordinate the work among Committees, determine policy if conflict arises between recommendations of other Board Committees, formulate viewpoints for consideration of the Board, identify problem areas and refer them to appropriate Committees for consideration and advice, consider appeals to Medical Staff appointment recommendations, and have particular responsibility for future planning, effectiveness of the Hospital Administration and accountability to the public.

The Executive Committee shall lay before each meeting of the Board a report giving a synopsis of all material action taken by the Executive Committee at all its meetings held since the last preceding report.

. . . . .

Section 6. The Service, Education and Research Committee shall consist in addition to the ex-officio members of not more than ten appointed members. The Chief of Medicine shall normally be invited to attend meetings.

Within approved policies, available finances, approved programs and legal considerations or rules, the Service, Education and Research Committee shall consider, approve or recommend policy on all matters pertaining to the quality of patient care provided in the Hospital, the type and extent of research, the nursing requirements and numbers, and the appointment and appointment procedures of qualified professional staff other than Chiefs of Departments. They shall refer to the Program Committee with their recommendations all proposals for new programs or services and to the Finance Committee all requests involving additional financial commitments.

The Service, Education and Research Committee shall review and accept or otherwise the minutes of the meetings of the Medical Advisory Committee, the Research Advisory Committee, the Joint Conference Committee or other Committees that may be designated from time to time by the Board.

The Committee shall ensure that there is provided and maintained a high degree of communication between the Medical and Research Staff and the Board, the staff and other agencies.

A report of the decisions taken at each meeting of the Committee shall be submitted to the Board.

. . . . .

Section 8. The Program Committee shall consist, in addition to the ex-officio members of not more than ten members, two of whom shall be the Vice-Chairmen of the Finance and Service, Education and Research Committees. Two members of the Program Advisory Committee, and the President of the Women's Auxiliary shall normally be invited to attend meetings.

The Program Committee is responsible for the review of all programs in the Hospital and the recommendation of policy relating to program control, and shall recommend the program objectives for service and research.

The Program Committee shall review all requests for new or changed programs, and shall make a review of existing programs at intervals as prescribed by the Board, and may recommend continuance, curtailment, discontinuance, alteration or modification of programs to keep the Hospital goals within available fund sources. To assist them in this role they shall be provided with a personnel complement authorized for all segments of the Hospital staff. They shall establish the discretionary limits within which the Hospital Administration can function without prior approval of the Committee.

A report of the Committee recommendations arising from each meeting of the Committee shall be placed before the Board.

Section 9. The Board may convene a Joint Conference Committee to consist of a variable number of Trustees, Medical or Nursing staff, the Executive Director and the Hospital Secretary. The Joint Conference Committee shall meet two or more times each year to discuss a subject of mutual concern. A report of discussions held shall be submitted through the Medical Advisory Committee to the Board.

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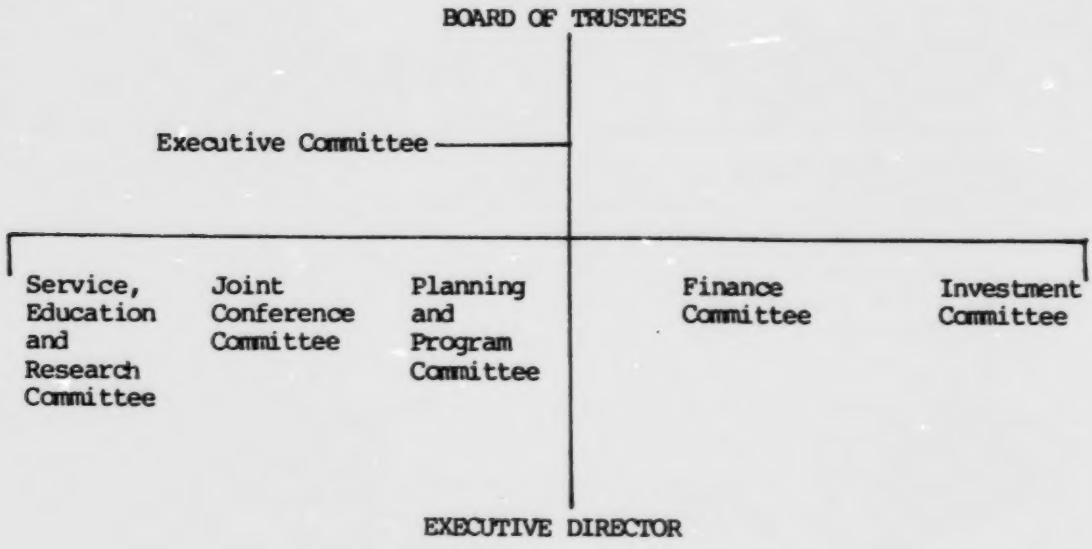
Part II

THE BOARD OF TRUSTEES

The committee structure chart for the Hospital for Sick Children is appended to this Part.

Structure of the Board

The structure adopted by the Board to carry out its major functions can be depicted as follows:



Membership of the Board

Pursuant to Section 1 of Article 2 of the Hospital for Sick Children by-laws, the number of trustees on the Board is established at a number not exceeding 30. In addition, the President and Vice-President of the Medical Staff, the Chairman of the Medical Advisory Committee, the Executive Director and the President of the Hospital for Sick Children, Women's Auxiliary, are ex-officio members of the Board. The remaining trustees are those that are from time to time appointed by resolution of the Board.

At the time of the Review the Board consisted of 26 appointed trustees plus the five ex-officio members, a total of 31.

Term of Office

The Hospital's by-laws provide that the Chairman and Vice-Chairman shall hold office for a period of five years, which term may be renewed by the Board for a further five years for a maximum term of office for ten years. There is no provision in the by-laws to limit the tenure of office of board members, who hold office until their successors are appointed.

An examination of terms of the appointed board members indicates:

1 member has served for 26 years
2 members have served for 18 years

2 members have served for 16 years
4 members have served for 14 years
1 member has served for 12 years
2 members have served for 9 years
2 members have served for 8 years
2 members have served for 7 years
4 members have served for 5 years
1 member has served for 4 years
3 members have served for 3 years
1 member has served for 1 year
1 member apprenticed in 1982
26

The Board meets quarterly to receive the reports of its committees. An examination of the minutes of its meetings indicates that it receives full and complete accounting of the committee functions in much greater depth than normally seen in board minutes.

Committees

1. The Executive Committee of the Board

Under Article VI, Section 4, of the by-laws of the Hospital, the Executive Committee has the delegated authority to exercise "all the powers of the board in conducting the affairs of the Hospital within board policies." An examination of the minutes of the Executive Committee, which meets monthly, indicates that the Executive Committee fulfills its functions as stated in a conscientious and diligent manner. It receives comprehensive reports from the other committees and reports effectively to the Board.

2. The Service, Education and Research Committee

For our purposes, the Service, Education and Research Committee is particularly significant. It is charged, amongst other duties, to consider, approve or recommend policy on all matters pertaining to the quality of the patient care provided in the Hospital. It receives reports from the Medical Advisory Committee, the Research Advisory Committee and the Joint Conference Committee or other committees that may be designated from time to time by the Board.

It is also charged with the duty of assuring a high degree of communication between the Medical and Research staff and the Board, the staff and other agencies.

A review of the minutes of this Committee indicates a determination to carry out these responsibilities in a very conscientious manner. Its ability to do so, however, is dependent on the input it receives from the committees reporting to it.

3. The Planning and Program Committee

Until about a year ago this Committee was designated the Program Committee. Planning was added to its responsibility. The purpose of the Committee is to review all programs in the Hospital at least once every five years and to review and make recommendations in respect to proposals for new programs. It also is charged with responsibility for supervising redevelopment programs.

The Committee is a multi-disciplinary body and meets monthly. A review of the minutes of the meetings of the Planning and Program Committee indicates diligent attention to the functions ascribed to it.

4. The Joint Conference Committee

The Joint Conference Committee is comprised of representatives of the Board of Trustees, senior Medical Staff and Administration. It meets twice a year to discuss specific items of mutual interest and concern. Article VI, Section 9, of the by-laws of the Hospital states, "a report of the discussions held shall be submitted through the Medical Advisory Committee to the Board." Since the Joint Conference Committee is a committee of the Board, it is rather unique to have it report to the Board through a non-board committee.

5. Other Board Committees

These were not deemed to be relevant to our review functions and were thus not examined.

COMMENT ON THE BOARD OF TRUSTEES

As stated previously, the Board has adopted by-laws for the governing of the Hospital which are deemed by the Review Committee to form a good framework for the conduct of its affairs. These by-laws are in conformity with the Public Hospitals Act of Ontario and its regulations. The structure of the Board and its committees is good with respect to providing the essential mechanisms for fulfilling the functions necessary to the discharge of its responsibilities. But as will be observed presently, matters have occurred in the Hospital which directly relate to the Board's legal responsibility for overseeing the quality of patient care and which do not appear to have been promptly reported to the Service, Education and Research Committee and hence to the Board.

Since the flow of important information to the Board comes from the Medical Advisory Committee through the Service, Education and Research Committee and from Administration through the Executive Director, the question must be asked as to whether or not the Board and its committees are being kept fully aware of major events occurring in the Hospital for which they have legal responsibility.

This does not negate the fact that the Hospital for Sick Children has a dedicated and conscientious Board of Trustees, good by-laws for the conduct of its functions and a good board structure for its performance.

There appears, however, to be some considerable "lag time" on the part of those responsible for reporting to the Board and its committees with respect to matters that lie within their jurisdiction.

The Review Committee is impressed with the qualifications of the trustees, who represent a very distinguished and accomplished sector of the community served by the Hospital. It agrees with the concept expressed in the study, Board Re-organization: Report to the Executive Committee, by John T. Law, 1972, that a hospital board must function in the public interest and therefore must structure itself accordingly. Thus, the emphasis must be placed on responsive boards rather than tokenism in the selection of board members. However, the Committee agrees with the observation in the Law Report that "it would be desirable for the Hospital to balance the legal,

banking, investment background of the present board with persons representing other experiences when future appointments are made."

As has also been previously noted, there is no provision in the by-laws of the Hospital relating to tenure of appointed board members.

The long tenure of some members can work to the benefit of the Hospital. But in order to ensure a regular change in board membership to meet changing needs in a manner honourable to both parties, the Review Committee believes that the by-laws should be amended to limit the term of office of trustees to a reasonable period of time. This would also have the advantage of allowing board members to withdraw without a feeling of having abandoned the Hospital.

The Review Committee notes that by statute the number of appointed board members is set at a maximum of thirty. Presently, as has been noted, the Board consists of 26 appointed trustees plus five ex officio members for a total of 31 members. In the opinion of the Review Committee the size of the Board militates against efficient and effective Board action. For the sake of efficiency, the Board has assigned, subject to any regulations which it may make from time to time, "all the powers of the Board" to the Executive Committee.

The Review Committee, however, is concerned about two results stemming from this structure:

1. Attendance at the quarterly meetings of the full Board is not consistently high;

2. Perusal of the minutes of the full Board indicates that the agenda is almost completely taken up by reporting to the Board on the activities of the committees with little time left for input or discussion by board members.

This may be explained by 1) lack of interest or 2) lack of a feeling of contribution. The feeling of being simply a "rubber stamp" for committee action may prevail.

The Review Committee notes with approval the attempt by the Board Chairman to involve all board members in the work of the Board's committee structure. However, it believes that a strong responsive board of fewer members meeting monthly would achieve the desired results and counter the concerns expressed above.

The Board, as a policy making body, must assure itself that it is receiving a balanced opinion on presentations made to it. The Review Committee recognizes the Board's difficulty in assigning priorities requiring major resources of space, monies and staff. There is some evidence, however, that programs and expansion of clinical services have taken place without complete understanding of their effects on support services and scarce resources.

There is evidence that there is not universal agreement among the Board, the Administration and the Medical Staff as to the authority, responsibility and accountability that each shares in the Hospital. It is the responsibility of the Board to ensure that the functions and responsibilities assigned to itself, the Administration and the Medical Staff are clearly defined and understood by all and that these are incorporated into practice in the Hospital.

The Review Committee is concerned about the apparent lack of co-ordination of the activities of those responsible for the clinical activities in the Hospital and the lack of a "focus" for their day-to-day reporting and co-ordination.

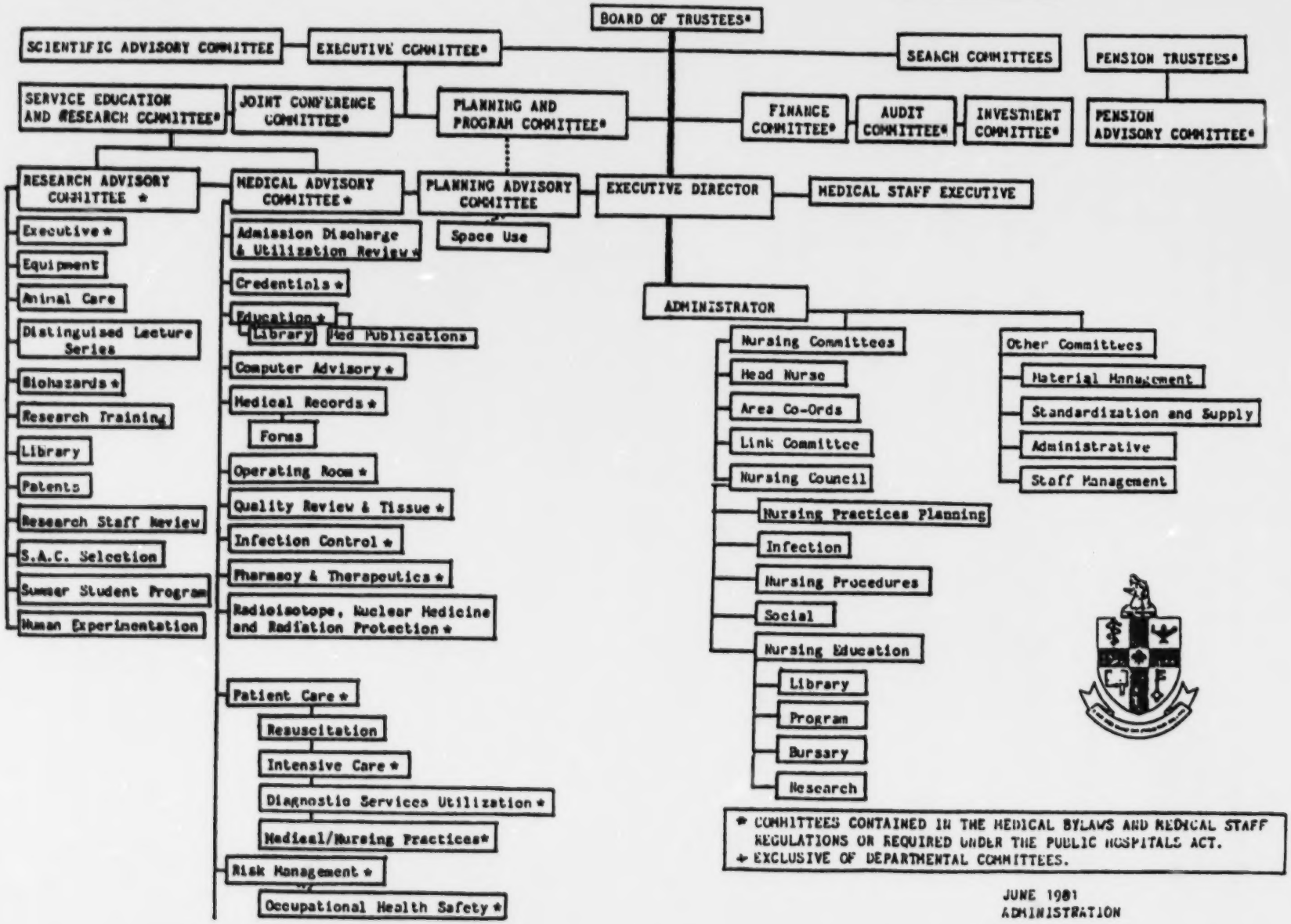
The Board of Trustees in this Hospital has given great leadership in endeavouring to maintain the world-wide reputation that the Hospital has achieved for its care of sick children, its teaching and its research. The care of sick children is very time-consuming and very demanding of the available resources of space, funds, equipment and staff.

In 1973, the then Administrator, Mr. Law, previously referred to, outlined "A Future Plan for the Hospital." He projected the role of the Hospital for Sick Children as being the guardian of the health of all children in the province. We think, with respect, that this was too ambitious a plan to be feasible in today's economic climate. Furthermore, we do not think that any one institution should undertake such a responsibility.

We fear that the present facilities and resources cannot continue to support a concept that the Hospital can be all things for all people. In our opinion a complex hospital such as the Hospital for Sick Children can grow to a size that can seriously compromise the major contributions that it can make. By way of comparison, this Hospital is approximately twice the size of the Children's Medical Center in Boston, Massachusetts, an equally renowned medical health centre for children.

The plan for the future should result in the provision of only such services for which this Hospital has unique capabilities. In this way it can best serve the public need.

THE HOSPITAL FOR SICK CHILDREN
COMMITTEE STRUCTURE +



* COMMITTEES CONTAINED IN THE MEDICAL BYLAWS AND MEDICAL STAFF REGULATIONS OR REQUIRED UNDER THE PUBLIC HOSPITALS ACT.
+ EXCLUSIVE OF DEPARTMENTAL COMMITTEES.

JUNE 1981
ADMINISTRATION

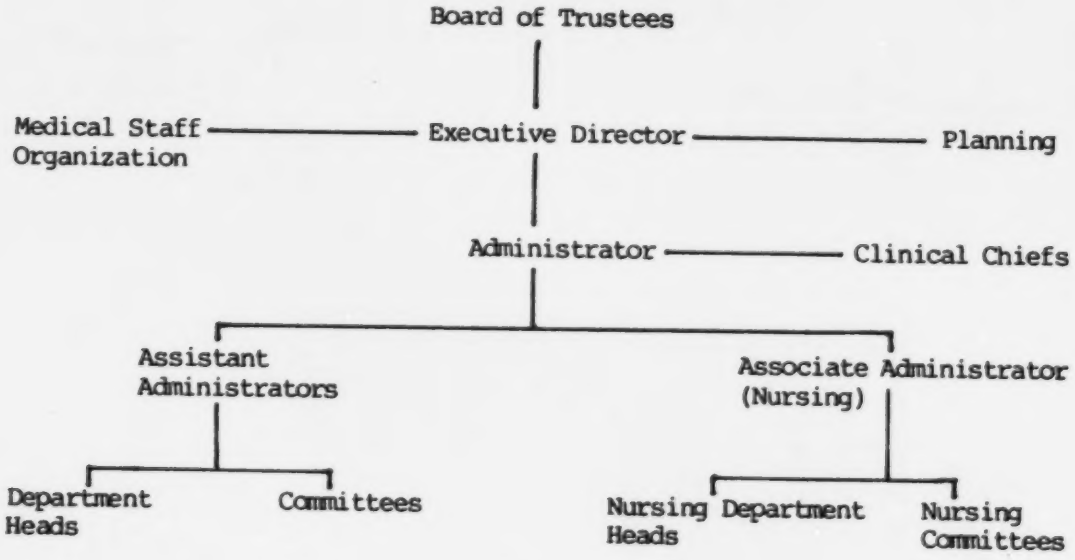
Part III

THE ADMINISTRATION

The organizational chart for the administration of the Hospital, as revised January 1982, is appended to this Part.

Structure of the Administration

The structure adopted by the Administration to carry out its major functions can be depicted as follows:



Senior Management

The senior administrative officers of the Hospital are:

- the Executive Director
- the Administrator
- the Associate Administrator (Nursing)
- the Assistant Administrators (6)

The Executive Director is appointed by the Board of Trustees and his performance is reviewed annually. The senior administrative officers are appointed by the Board on the recommendation of the Executive Director.

Department Heads

The department heads reporting to senior management represent the various support services provided by the Hospital.

They are appointed by the Executive Director on the recommendation of the Administrator.

Committees

The major administrative committees are:

Material Management Committee
Standardization and Supply Committee
Administrative Committee
Staff Management Committee

In addition to these committees, administrative personnel serve on such committees as:

Admission, Discharge and Utilization Review Committee
Computer Advisory Committee
Medical Records Committee
Operating Room Committee
Quality Review and Tissue Committee
Infection Control Committee
Pharmacy and Therapeutics Committee
Patient Care Committee
Risk Management Committee
Planning Advisory Committee
Medical Advisory Committee
Nursing Committees
- Nursing Practice Planning Committee
- Nursing Infection Control Committee
- Nursing Procedure Committee

- Nursing Education Committee
- Nursing Standardization of Equipment and Supplies Committee
- Social Committee

Research Advisory Committee

Joint Conference Committee

Ad Hoc Committees

COMMENT ON THE ADMINISTRATION

Structure

There is no single accepted structure for organizing the administration of a hospital. Organizational structure must, however, be directed towards carrying out the major functions of administration, namely: planning, organizing, directing, staffing, co-ordinating, communicating and budgeting. To accomplish this, lines of authority, responsibility and accountability must be clearly delineated. The less complex the structure, the better it will serve its intended purpose.

A review of the administrative structure indicates:

There is no identifiable management or executive committee. The Review Committee believes that a management committee comprising the Executive Director, the Administrator, the Associate Administrator (Nursing), the Chairman of the Medical Advisory Committee and the President of the Medical Staff would serve a very useful purpose in decision making, communication and education by serving in an advisory capacity to the Executive Director.

The chiefs of the clinical departments report to the Administrator on administrative matters while the chiefs of the diagnostic services appear to report to the Assistant Administrators. The Review Committee does not understand the reason for this dichotomy.

The administrative aspects of the various clinical services have been assigned to several administrative assistants. This structure has two advantages in that 1) it provides insight into clinical areas to the administrative officers and 2) it provides senior administrative support to the clinical services. The Review Committee, however, believes that these advantages must be weighed against the fact that co-ordination in the

clinical areas and an overview of the total clinical aspect may be lost by Administration.

Senior Management

1. The Executive Director

The Public Hospitals Act of Ontario, R.S.O. 1980, section 1(a), and Regulation 865, section 7(1) state:

> "The Board shall pass by-laws that provide for the appointment and functioning of an administrator"

and define an administrator as:

> "The person who has for the time being direct and actual superintendance and charge of a hospital."

In accordance with the Public Hospitals Act, the Board of Trustees of the Hospital for Sick Children in Part I, Article I, of the by-laws states:

> "The Executive Director shall mean the person appointed to such position by the board."

The duties of the Executive Director are defined in Article V, Section 5, of the by-laws of the Hospital.

In a Group A hospital--a teaching, referral, university affiliated hospital--with the complexities inherent in the Hospital for Sick Children, the Executive Director has many duties to perform other than those prescribed by law. He must be the Hospital's representative on all matters dealing with the provincial government, the University, the educational colleges, the research bodies, the Foundation, the other hospitals, the various health organizations and the community health and support groups. In addition he is the Hospital's spokesman and the community public relations man. He is also responsible for the operation of the Hospital and liaison with the Board of Trustees and the medical staff.

The present incumbent has held the position since July 1, 1970. He is well qualified by experience and training to perform the functions assigned to him. He has carried out those duties that he has reserved for himself in a competent and exemplary manner. His contributions to the health and education fields are well known and he is regarded by his "peer group" in Administration as a competent and effective administrator.

Because of his time commitments to these extra duties, the Executive Director has delegated the major functions of the day-to-day operations of the Hospital to an assistant called "the administrator" and reserved for himself the decision making tasks, board activities, medical staff liaison, long term planning and "outside" duties.

While the functions involving the day-to-day operations of the Hospital can be delegated, the responsibility cannot be abrogated. This responsibility has been assigned by law to the Executive Director.

The danger inherent in this type of organization is that the Executive Director could find himself too far removed from the day-to-day operational problems.

2. The Senior Administrative Staff

The Administrator at the Hospital for Sick Children is charged with the day-to-day operation of the Hospital. Prior to January 1981, this position was held by a qualified and experienced hospital administrator. Upon his resignation in January 1981, and until the arrival of his successor in January 1982, the position was held temporarily by a senior assistant administrator.

Prior to January 1981, the Administration consisted of a mix of assistant administrators, some with formal training and some who had come through the ranks with wide experience at the Hospital. The Administrator, at least "theoretically", was responsible for the day-to-day operations of the Hospital. In practice, however, the authority and responsibility of the Executive Director and the Administrator were not too well defined or at least not adhered to.

Minutes of the Administrative Committee dealt with "pure" administrative matters while the Executive Director handled all clinical concerns and the "problems of the ward." Nursing did not have an effective voice in the administrative structure and there was no medical presence.

In January 1982, a highly qualified and experienced administrator was appointed to that post. On his arrival the administrative structure was changed to reflect the major role of nursing in the Hospital and to assign among the various assistant administrators responsibilities for administration in the patient care and diagnostic service areas.

Upon the retirement of several assistant administrators, new appointments were made from university graduates in business administration with health field backgrounds. The executive structure was greatly strengthened. Direct liaison was established between the clinical chiefs and the Administrator.

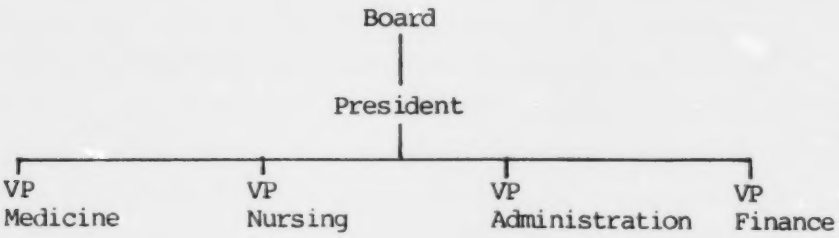
However, there is still lacking a medical presence in Administration. All other activities of the Hospital are represented by some administrative officer, who is expected to have expertise in his or her area. Yet there is no one of comparable status or expertise to co-ordinate the clinical activities of the medical staff and to advise the Administration on medical and patient care matters.

There is a very strong feeling within the Hospital, among the medical staff below the rank of department chief or division head, that they have no input into Administration. Although they bear the front line responsibility for patient care, they feel that they lack a voice in Administration in determining policies and procedures relating to patient care. Although the department chiefs and the heads of the divisions provide essential important representation in the management of the Hospital, on occasion they are perceived by the medical staff to be another arm of Administration, who may not truly represent the views of "the foot soldiers" at all times. This has affected the morale of the medical staff, particularly in the troubled times over the last few years and, if left unchecked, could have an adverse effect on patient care.

The restructuring of Administration to provide a medical presence within it, we think, is essential to improve the patient care monitoring ability

of the present administrative staff and will go a long way in improving the morale of the medical staff. A suggested administrative structure is set out below:

SUGGESTED ADMINISTRATIVE STRUCTURE



Vice-President Medicine

1. Accountable for quality of medical care.
2. The chief medical administrative person reporting directly to the President.
3. Department heads would report directly to this office, as would the Emergency and Intensive Care Units.
4. Would present medical concerns to the President and to the Board.
5. Be responsible for recommending changes in medical policies, budgets and priorities.
6. Would sit on the Management Committee which is referred to previously in this chapter.

3. Department Heads

Several of the department heads have been at the Hospital for many years. They are loyal and dedicated employees. Middle management is the strength of any operation.

To ensure that long term department heads are continually upgraded in knowledge and new department heads are encouraged in growth, the Review Committee strongly supports a program of continuing management education within and outside of the Hospital.

It further believes that a continuous effort should be made to involve department heads in the decision-making process. Such efforts will enhance the image of the department heads and make them feel more a part of the whole Hospital.

Committee Structure

The committee structure designed for the performance of medical and administrative functions is, to say the least, very comprehensive. While appreciating the many facets of operation inherent in a hospital with the complexities of the Hospital for Sick Children, the Review Committee cannot help but wonder if the present organizational structure does not lend itself to "decision making by committee." The structure so designed leaves little time for adequate preparation for meetings, to say nothing about the time it takes to "put things through the mill" and the efficient use of administrative and medical staff time.

Planning Advisory Committee

A multidisciplinary Planning Advisory Committee reviews all requests for program development and serves as an advisory committee to the Planning and Program Committee of the Board.

The Hospital has been faced with staff shortages, cutbacks in operating revenues and space limitations. The Administration has had to cope with these at the same time that it was faced with the decisions of the Board to implement the largest expansion program in clinical services in the history of the Hospital. Space, staff, equipment and monies were required and these were often provided at the expense of other areas badly in need of help. Clinical expansion, good in itself, was pursued vigorously without full regard or reference to the resources available or to the impact such demands would have on support services already stretched to the limit.

In the view of many in the Hospital, the Planning Advisory Committee, excellent in its concept, was used to advance the cause of a few to the detriment of others.

In its responsibility for appropriating scarce resources, or at least persuading the Board of Trustees in its allocation of resources, the

Administration failed to ensure their "balanced" use when implementing new programs. The Review Committee could find little evidence of administrative support for such areas as Pharmacy and Central Supply and, until the re-organization, Nursing. Even recognizing significant changes and developments in medical practice over the past decade, the changing fiscal climate and other outside influences, some of the support services were allowed to fall below a standard acceptable for a hospital such as the Hospital for Sick Children. Marked overcrowding in some nursing wards and clinical laboratories is also prevalent.

It is recognized that the physical resources of the Hospital are in many ways too limited in space and antiquated in design to make renovations in some areas feasible and that new building plans have been drawn up to rectify existing problems. It would appear, however, that in the allocation of scarce resources, top priority was assigned to the development of clinical programs, often at the expense and to the detriment of needed support services. At best, these support services were not encouraged to develop to a degree or standard that should exist in a hospital of this type. The major effort made recently to correct this situation is noted with approval.

Directing

While the administrative organizational chart indicates the lines of authority and responsibility, the Review Committee was concerned to hear the views of the Board, medical staff and hospital staff with respect to "who was responsible for what."

There exists a difference of opinion as to who is the chief executive officer: the Board Chairman or the Executive Director.

The split in authority and responsibility between the Executive Director and the Administrator is not well understood by all and thus not always adhered to.

There is disagreement among some within the administration and medical staff as to who has the overall responsibility for medical care in the Hospital. There exists confusion in the minds of some regarding to whom they go in order to resolve conflicting viewpoints and actions.

The Committee was informed that there exist in the Hospital some 150 departments, which makes co-ordination difficult. Some of these departments are very small and maintain their categories for traditional or other reasons.

The Review Committee is of the opinion that the Administration should review the departmental structure in all areas and activities of the Hospital with a view to consolidating many existing departments for the purpose of improving communications and providing more effective management.

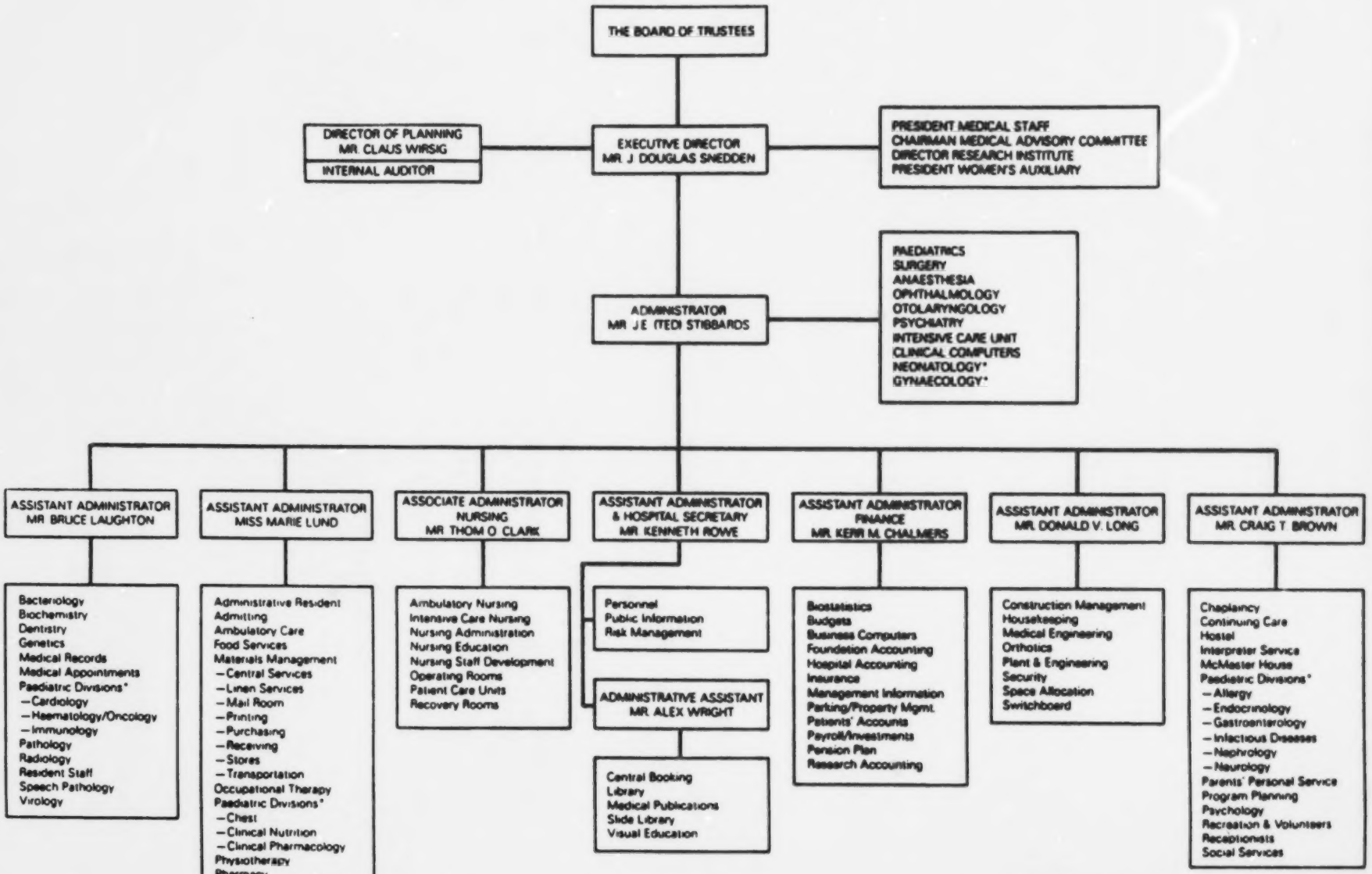
Staffing

The Hospital for Sick Children is fortunate to have a staff of dedicated employees. Every effort should be made to involve them as much as possible in the decisions affecting the present and future plans of the Hospital.

THE HOSPITAL FOR SICK CHILDREN

REVISED: JANUARY, 1982

ORGANIZATION CHART



*ADMINISTRATIVE LIAISON
PROFESSIONALLY RESPONSIBLE TO CHIEF OF PAEDIATRICS

Chapter IV

The Organizational Structure of the Medical Staff

Part I

ELECTED OFFICERS OF THE MEDICAL STAFF

Article XX and Article XXI of Part II of the Hospital's By-Laws, which relate to the meetings of the medical staff and its elected officers, are reproduced below:

> ARTICLE XX: Meetings of the Medical Staff
>
> Section 1. Each Department shall hold not less than ten business meetings during the appointment year, and the minutes of each meeting shall be properly recorded by the departmental secretary.
>
> Section 2. All but stated meetings shall be called by the Chief of the Department, or his deputy, giving at least forty-eight hours' written notice thereof by posting the same on the Department notice board.
>
> Section 3. At these business meetings, departmental, administrative and medical policy and medico-administrative matters shall be considered.
>
> Section 4. The members of each Department, at the first meeting of the Department after the first day of July shall elect a departmental secretary for the appointment year.
>
> Section 5. The departmental secretary shall keep an attendance record.
>
> Section 6. The departmental secretary of each Department shall report the attendance records for which he is responsible to the Committee on or before the thirty-first day of December of each year.
>
> Section 7. Each Department shall hold at least ten scheduled scientific meetings during the appointment year as directed by the Chief of the Department.

Section 8. Each member of the Active Staff shall be expected to attend all meetings unless excused by the Chief of the Department.

Section 9. The annual meeting of the Medical Staff shall be held during the month of February; all members of the Active Medical Staff shall attend unless excused.

Section 10. The time and place of the annual meeting shall be decided by the Medical Staff executive and the Committee. The Medical Staff shall be given fourteen days' notice of the meeting in writing which shall be delivered to each member personally or mailed by prepaid post addressed to each member at his respective address as it appears on the records of the Secretary.

Section 11. A majority of the Medical Staff members entitled to vote shall constitute a quorum.

Section 12. The order of business at the annual meeting of the Medical Staff shall be as set forth in the Regulations.

Section 13. The President or the Secretary of the Medical Staff shall call a Special General Meeting at any time, either of his own motion or if requested to do so by:

(a) The Board;

(b) The Executive Director;

(c) The Chairman of the Medical Advisory Committee; or

(d) Any fifteen members of the Active Staff, in writing.

Section 14. Two clear days notice of any such meeting shall be given by the Secretary to all members of the Medical Staff.

ARTICLE XXI: Elected Officers of the Medical Staff

Section 1. The elected officers of the Medical Staff shall be:

(a) a President;

(b) a Vice-President; and

(c) a Secretary.

Section 2. One officer shall be elected from the members of the Department of Medicine.

Section 3. One officer shall be elected from the members of the Surgical Departments.

Section 4. One officer shall be elected from the members of the Departments, other than Medicine or Surgery, in alphabetical rotation of Departments, subject to diagnostic departments being grouped for this purpose.

Section 5. The elected officers of the Medical Staff shall take over their duties immediately following their election at the Annual Meeting of the Medical Staff.

Section 6. Any elected officer may be re-elected to that office for a second year, but shall not be eligible for re-election to that office for a third year until at least one year has elapsed.

Section 7. There shall be an officer from the Department of Medicine and the Surgical Departments each year, but each office shall change Department affiliation at least every successive two years.

Section 8. The President shall:

(a) Be an ex-officio member of the Board and the Committee, and represent the views of the Medical Staff to the Board;

(b) Be Chairman of the Annual Meeting and of any Special General meeting of the Medical Staff.

(c) Six weeks prior to the Annual Meeting of the Medical Staff, appoint a Nominating Committee of not less than three past presidents to prepare nominations for the election of officers of the Medical Staff.

(d) Appoint such committees as may be required to conduct the business of the Medical Staff members, but at all times, such committees shall report through the President.

(e) Report minutes of general meetings and of appointed committee meetings to the next meeting of the Committee for comment and submission to the Board for approval.

Section 9. The Vice-President shall be an ex-officio member of the Board and the Committee, and shall act in the place of the President in the absence or inability to act of the President, and perform such duties as may be assigned by the President.

Section 10. The Secretary of the Medical Staff shall:

(a) Perform the duties of the Medical Staff Secretary as set out in the regulations under the Public Hospitals Act and Article XX above;

(b) Perform the duties of the President in the absence or inability to act of both the President and Vice-President;

(c) Keep the minutes of all general meetings of the Medical Staff and maintain a record, by name, of each one in attendance at such meetings. An excuse in writing may be accepted for absence but does not give credit for attendance;

(d) In case a quorum of the Medical Staff has not arrived at the place named for the general meeting, within thirty minutes after the time named for the start of the meeting, give those members then present credit for their attendance;

(e) Perform such other secretarial duties as the Medical Advisory Committee may direct;

(f) Be an ex-officio member of the Committee.

The President and Vice-President of the medical staff are ex-officio members of the Board of Trustees.

Comment on Medical Staff Representation

The function of the elected officers is to represent the views and interests of the medical staff at large. It has been acknowledged that the medical staff association has not been an effective instrument in fully partaking of the many activities which relate to the medical staff in the Hospital. Apart from the annual meeting at which the officers are elected, little is heard of it with respect to practices and procedures in the Hospital. The brief tenure of office of the elected officers is so short that their ability to make effective representation is muted. Although the President and Vice-President are ex officio members of the Board, little opportunity is afforded for direct input into Board deliberations.

The provision for the election of officers on the basis of departmental rotation limits the opportunity for the staff to select those who they feel are best able to represent their point of view.

The Committee is of the opinion that the by-laws should be changed to provide for a more lengthy tenure of office and to permit of a wider choice in the selection of those eligible to be elected.

As has been previously noted, there is a sense of uneasiness amongst the medical staff by reason of their perceived inability to have more direct input into the decision-making process in matters directly relating to their work. The medical staff, we think, bears some responsibility for this in their failure to take the initiative to make their staff association a more active and meaningful body.

Part II

COMMITTEES

In the Hospital for Sick Children there is a very complex medical administrative committee structure. Many of the committees appear to have overlapping functions, and the major ones are for the most part made up of the same individuals.

For the purpose of this Review, the two most significant committees are the Medical Advisory Committee and the Risk Management Committee.

THE MEDICAL ADVISORY COMMITTEE (MAC)

The composition and duties of the Medical Advisory Committee are set forth in Article XXIII of Part II of the By-Laws of the Hospital, which is reproduced below:

> ARTICLE XXIII: Medical Advisory Committee
>
> Section 1. The Committee shall be appointed by the Board at its Annual Meeting for a period of one year from July 1st, and shall consist of:
>
> (a) The Chief of each Department of the Medical Staff;
>
> (b) The Chief of Nursing;
>
> (c) The elected Officers of the Medical Staff;
>
> (d) The Executive Director of the Hospital;
>
> (e) The Director of the Research Institute; and
>
> (f) Such other person or persons as may be appointed from time to time by the Board after considering the recommendations of the Committee.
>
> Section 2. At any meeting of the Committee or other medical committees, more than 50% of the voting members shall constitute a quorum.
>
> Section 3. At any meeting of the Committee or other medical committees, the vote of a majority of the members present shall

carry, and in the case of a deadlock on any vote, the Chairman shall be entitled to have a second or casting vote.

Section 4. If any member of the Committee is unable to attend a meeting of the Committee, he shall send a deputy in his place, either to observe or to vote for him by proxy, and shall notify the Chairman or Secretary of his substitution.

Section 5. The Committee at the May meeting of each year, shall elect from among its number the officers, comprised of a Chairman, Vice-Chairman and a Secretary to take office on July 1st next following.

Section 6. The term of office of the Chairman, of the Vice-Chairman and of the Secretary shall each begin the first day of July following such election and extend through the appointment year of the Medical Staff, to the thirtieth day of June next following.

Section 7. One member may serve as an officer for two successive terms but shall not be eligible for re-election to the same office until at least one year has elapsed.

Section 8. The Chairman of the Medical Advisory Committee shall:

(a) Be ex-officio, a member of the Board;

(b) Call monthly meetings of the Committee; except in July and August;

(c) Preside at each meeting of the Committee;

(d) Be a non-voting member, ex-officio, of all medical committees appointed by the Committee;

(e) Call special meetings of the Committee when necessary;

(f) Present the minutes of all Committee meetings to the Board for approval.

Section 9. The Vice-Chairman shall act in the place of the Chairman in the absence or inability to act, of the Chairman and shall be a non-voting member, ex-officio of all medical committees.

Section 10. Two clear days notice in writing shall be given for any meeting of the Committee called.

Section 11. The Secretary of the Committee shall:

(a) Be responsible for the notification of meetings, the agenda and the maintenance of accurate minutes of all meetings of the Committee, assisted by the Hospital Secretary who shall act as the Recording Secretary of the Committee.

(b) Provide the Executive Director with a copy of the minutes, and reports as required under those By-Laws, for submission to the Board for approval.

(c) Call special meetings of the Committee when requested by the Board, the Executive Director, the Chairman of the Committee, or by any three members of the Committee.

(d) Act in the place of the Chairman or the Vice-Chairman in their absence or inability to act.

(e) Ensure that the recommendations of the Committee, as approved by the Board, are implemented.

Section 12. If the office of the Chairman, Vice-Chairman or Secretary of the Committee becomes vacant, it may be filled for the remainder of the term of office by an election held at any duly constituted meeting of the Committee.

Section 13. The Committee shall:

(a) Represent the entire Medical Staff of the Hospital, provide supervision over the practice of medicine in the Hospital, act as one route of liaison between the Medical Staff and the Board, advise the Board on any matter referred to it by the Board and report to the Board at least six times in each fiscal year and the Medical Staff at least once in each fiscal year, as defined in By-Law VII.

(b) Recommend to the Board for enactment by it, the Medical portion of the By-Laws and Medical Staff Regulations of the Hospital, and amendments thereto as the Committee may from time to time deem advisable;

(c) Assist and advise the Chiefs of Departments with the clinical organization and supervision of the Hospital;

(d) (i) Approve for submission to the Board general medical policies for the various Departments;

(ii) Coordinate the activities of the various Departments of the Medical Staff;

(iii) Make recommendations to the Board concerning the quality of medical care provided in the Hospital.

(e) Designate committees of the Medical Staff, and advise the Board as to which committees should be changed, eliminated or added.

(f) Make recommendations to the Board concerning every application for appointment or re-appointment, to the Medical Staff and House Staff;

(g) Submit its concurrence or recommendations in addition to the recommendations of the Special Selection Committee, Article XIV, Section 6.

(h) Make recommendations to the Board for the dismissal, suspension or restriction of Hospital privileges of any

member of the Medical Staff who contravenes the provisions of the Hospital By-Laws, or of the Regulations or Acts. The Committee, before making its recommendations under this sub-paragraph, may direct an investigation to determine the facts of the case, and hear and consider the explanations and defence of the Medical Staff member being disciplined. The Committee must institute an investigation if the individual member so requests in writing to the Secretary of the Committee;

(i) Advise and cooperate with the Executive Director and the Board in all matters pertaining to the medical, nursing and paramedical services;

(j) Appoint members from the Medical Staff to attend meetings of the Joint Conference Committee (By-Law VI, Section 9);

(k) Appoint from the Medical Staff members to medical committees and a Chairman of each such committee. The terms of reference of such committees shall be detailed from time to time in the Medical Staff Regulations;

Committees thus appointed will normally include:

1. Admission, Discharge Committee
2. Credentials Committee
3. Education Committee
4. House Staff Committee
5. Infection Control Committee
6. Medical Records Committee
7. Medical Staff Appointments Review Committee
8. Operating Room Committee
9. Patient Care Committee
10. Pharmacy and Therapeutics Committee
11. Quality Review and Tissue Committee
12. Radioisotope and Radiation Protection Committee

(l) Receive the regular and annual reports and recommendations of the medical committees and take or recommend appropriate action;

(m) Ensure that all committees appointed meet as directed from time to time by the Committee, submit reports in writing to the Committee when policy decisions are requested and report at regular intervals to the Committee as required. Annual reports shall be

submitted each year to the Committee for approval. Minutes of meetings shall be maintained in books set aside for this purpose which will be held by the Hospital Secretary;

(n) In the event of a vacancy occurring on any medical committee, fill the vacancy at its next meeting. The duration of such appointments shall extend to the end of the unexpired term of the committee member replaced;

(o) Advise the Board, after consultation with the Executive Director and the Chief of Nursing, concerning the formulation of Standing Orders for Hospital Staff guidance as to:

(i) Generally accepted medical and surgical procedures of diagnostic and therapeutic practice;

(ii) Generally accepted nursing procedures;

(iii) The control of visitors, the admission and discharge of patients, and any other matters of concern about which the Administration may seek guidance.

(p) Consider and recommend to the Board all requests for Medical Staff study leave within the policies described in Part III of these By-Laws;

(q) Recommend to the Board whether or not permission should be granted to inspect medical records and remove information from them for the purposes of research or statistical analysis;

(r) Recommend the format of the Medical Staff list and the access to copies of the list;

(s) Make recommendations concerning the regulation, discipline and instruction of the House Staff with respect to their professional duties and responsibilities.

Comment on the Medical Advisory Committee (MAC)

The Medical Advisory Committee is appointed by the Board to advise it on all matters relating to the conduct of the medical services in the Hospital and is the major committee charged with making representation to the Board concerning the quality of the medical care provided. To carry out its functions and its accountability to the Board, the Medical Advisory Committee has established within its organization the following committees:

- House Staff Committee
- Patient Care Committee
- Pharmacy and Therapeutics Committee
- Quality Review and Tissue Committee
- Medical Records Committee
- Admission, Discharge and Review Committee
- Radioisotope, Nuclear Medicine and Radiation Protection Committee
- Infection Control Committee
- Operating Room Committee
- Education Committee
- Credentials Committee
- Computer Advisory Committee

It is to be noted that, in addition to the elected officers of the medical staff, the only medical representation is that of the chief of each department. It is the view of the Committee that the Medical Advisory Committee would be strengthened by including other representatives of the medical staff.

Article XVII, Section 3(a), of the Medical Staff By-Laws states that the chief of a department shall "be responsible through the Executive Director and the [Medical Advisory Committee] . . . to advise with respect to the quality of medical diagnosis, care and treatment provided to the patients and out-patients assigned to his Department."

A perusal of the Minutes of the Medical Advisory Committee discloses little evidence of reporting to the Committee by the clinical chiefs on the conduct of their departments and divisions with respect to the care of patients. The feeling appears to prevail that all clinical matters are the responsibility of the chiefs of departments and the assessment of clinical care is entirely the responsibility of the chiefs, and not the business of the Medical Advisory Committee or the Executive Director.

Since the major function of the Medical Advisory Committee is to advise the Board as to the quality of care provided in the Hospital, the Review Committee is concerned as to how the Medical Advisory Committee can assure the Board that the clinical activities in the Hospital are being adequately monitored and are of a satisfactory quality if it feels no responsibility or accountability for them.

A review of the Minutes of the Medical Advisory Committee also disclosed that there was no reference to important matters affecting the quality of patient care which ought to have been promptly brought to its attention. We refer in particular to the incidents that occurred in the Cardiology Division between July 1980 and March 1981.

The Review Committee believes that the Medical Advisory Committee should review its functions as stated in the by-laws in order to assure the Board that it is fulfilling its mandate to review, analyse and evaluate patient care in the Hospital.

The hospital organization at the Hospital for Sick Children embraces a "double barrelled" reporting system to the Board of Trustees: 1) the Administration and 2) the Medical Advisory Committee. The results are two-fold:

1. It is difficult to ascertain the responsibility of the Executive Director for the activities of the medical staff in patient care areas. This is complicated by the expressed opinion of some members of the Medical Advisory Committee that the function of the Executive Director is only "to look after the support services, finance and get monies and programs from the provincial government."

2. The physicians' authority to practise in the Hospital comes from the Board of Trustees. Yet there is a failure of the Medical Staff as a whole to understand that it is part of the total hospital organization. This seriously impairs its ability to provide accountability to the Hospital for the quality of medical services in the Hospital.

The Medical Staff organization, as implemented, encourages the development of individual fiefdoms. Since it is the philosophy of some members of the Medical Advisory Committee that the activities of the clinical departments are the sole responsibility of the chiefs of the departments, there appears to be no "collective" responsibility with respect to the review, analysis and evaluation of medical care in the Hospital.

The Review Committee believes that the failure to have one person accountable for total medical staff performance is a major deficiency in the medical staff's accountability to the Board.

The Minutes of the Medical Advisory Committee and its committees indicate that there is little discussion of clinical care and clinical problems in the Hospital. The agendas devote themselves, in the main, to receiving reports from committees without much evidence of constructive recommendations to improve the quality of medical care.

We believe that the Medical Advisory Committee should review its terms of reference and its agenda to ensure that it is fulfilling the responsibilities assigned to it by the Board and by the Public Hospitals Act.

The Review Committee believes that the important role of the Medical Advisory Committee must be re-enforced by the Board and understood by the Medical Staff, the Board and the Administration.

The Review Committee believes that the present committee structure, of which the Medical Advisory Committee is only one, should be reconsidered with a view to eliminating overlapping functions and consolidating like functions. This would improve the deliberations at the committee level, shorten the time phase in which recommendations could be dealt with by decision makers, and free the time of the Medical Advisory Committee for more constructive attention to quality of care issues.

THE RISK MANAGEMENT COMMITTEE

In the fall of 1980, the Risk Management Committee was first introduced into the administration of the Hospital. It includes the Chiefs of Paediatrics and Surgery; the Chairmen of the Medical Advisory Committee, of the Patient Care Committee, and of the Quality Review and Tissue Committee; the Executive Director; the Administrator; the Associate Administrator (Nursing); and the Hospital's Secretary, who serves as the Risk Manager.

Its purpose is to reduce risk or hazard to patients or staff and to help prevent injury, accidents or untoward incidents. Essential to its operation is the input of all risk data from all sources within the

Hospital. It can also undertake investigations on its own and report on specific incidents of major concern. All medical/legal matters are expected to be submitted to it.

The Risk Management Committee meets at least monthly and reports to the Service, Education and Research Committee of the Board.

The Risk Manager serves as a co-ordinator and is expected to report the data gathered by the Committee to the Administrator on any matter which may require immediate action.

The following excerpts from an internal report on risk management are illustrative of its concept and method of functioning:

THE HOSPITAL FOR SICK CHILDREN
REPORT ON RISK MANAGEMENT

BACKGROUND

The concept of Risk Management was proposed in The Hospital for Sick Children in 1974, and again in 1977, but it was not until September 1980 that active consideration of the proposal commenced at the Patient Care Committee level, to move ponderously through the Medical Advisory Committee to the Service, Education and Research Committee where the concept was approved at their November 13, 1980 meeting for a one-year trial. On further consideration, it was agreed that the trial period be reduced to six months.

At the time of the acceptance of the Risk Management program, the term had become accepted in many hospitals and the idea was fast spreading. The timing of the presentation was fortuitous for its acceptance as it coincided with increasing concern in respect to unfortunate experiences, and unusual exposure from several Coroner's cases.

As far back as March 1980, the Service, Education and Research Committee had voiced the opinion that a process of total investigation to obtain the chronology of any untoward incidents was commendable, and that a single medical and a single administrative spokesman should be appointed to be the point of contact on all such matters. Since September 1979, a member of the Service, Education and Research Committee had been assigned to review the monthly collection of incident reports as one means of attempting to monitor untoward events. It was to be illustrated later that the incident reports were but one small part of the total program, and not the prime source of information of the really serious problems.

The Risk Management Committee was established under the chairmanship of the Executive Director. Members were the Chairman Medical Advisory Committee, Chairman Patient Care Committee, Chief of Paediatrics, Chief of Surgery, the Director of Nursing, and the Risk Manager. The Chairman Quality Review and Tissue Committee and the Administrator were added later. The minutes of the committee have been passed through the Medical Advisory Committee to the Service, Education and Research Committee monthly. The first meeting was in January 1981, and thus we come to the end of a six-month trial in June 1981.

DEVELOPMENT

With a mandate to identify and report all information on potential risks, the Risk Management Committee turned first to the Incident Reports. These reports are being circulated in monthly batches to the medical members of the committee by the Hospital Secretary. A copy of each report goes to the Director of Nursing and thence to the Occupational Health and Safety Committee, and the originals are filed alphabetically by the Hospital Secretary. The incident reports are also reviewed monthly by the adjuster of the insurance company.

The committee recognized that the incident reports are seldom significant in themselves, but in significant cases, the responsible Chief quickly takes corrective action. The main purpose served by these reports is that collectively, it is possible to identify patterns by a statistical analysis. For this reason, these reports, though important, were accepted as one input, and were presented only in synoptic form, with comments as to specific actions taken by the Chiefs from their reviews. The committee then looked elsewhere for further relevant data.

From reviewing a great many documents submitted, the committee identified the primary sources of information on a routine basis as being the Hospital Secretary and Medical Records Department. The Hospital Secretary in the role of dealing with all legal matters in the Hospital, in addition to receiving incident reports or reports on serious incidents, was aware of all writs served on the Hospital, all inquests or legal enquiries. These matters were reduced to a synoptic quarterly return of all cases under review, and are essentially the real problems facing the Hospital. Medical Records data includes all Coroner's cases and Medical/Legal inquiries to give early warning of potential problems. Then the Occupational Health and Safety Committee deals with, and reports as to the environmental hazards. From these three main sources of reports plus incident reports, the Risk Management Committee has a steady flow of data which will help to warn of actual or potential risks.

In addition to the routine data established, the Risk Management Committee were aware that there were a great many "untoward incidents" (with several alternate titles) which inevitably occurred in the treatment of patients. A review of the systems used by each discipline was ordered and completed. This exercise in itself brought the subject into sharp focus and helped departments to develop formal protocols. The Risk Management Committee

is now arranging for each discipline to have formal reviews of all such incidents, primarily for educational purposes. However, be reported to the Chief of Service and thence to the Risk Manager.

PRESENT

The Risk Management program has succeeded in the aim of capturing and bringing together much of the data pertinent to the liability risks. They are now identified as the point of contact, through the Risk Manager, for all reports of risks identified. In addition, they form the standing group to investigate the full details of any unfortunate major incident. Because the committee is comprised of senior persons, it can carry out very quick remedial action, either individually or collectively when a problem is identified.

From a cautious and suspicious beginning, the Risk Management process has become a respected and recognized body internally, and has developed into an important monitor or [sic] risks. As an additional benefit, it contributes to the quality of patient care by being a known and respect monitor. Whether or not it succeeds in preventing incidents by direct action, its existence will at least make a contribution in that direction.

It can now be said that the gradual emergence of a pattern has been only the prologue. The Risk Management program is now ready to produce, this is the end of the beginning.

The Trustee role has been stated as one of ensuring that proper internal checks and balances are in place and are working. Their role of responsibility for the quality of care is particularly related to the need of a good Risk Management program. By following the committee reports, and by suggestions, further inputs or further controls, the Trustees can fulfill their role in this regard.

FUTURE

The Risk Management program has filled a definite need in the Hospital, and the continuance of the program is recommended. However, the committee must continue to reach out for more reports to identify, and correct risk situations in medical treatment or in plant or equipment aspects of risk.

The investigation of serious incidents by the Risk Management Committee is still not quite tidy. The need for confidentiality at some times is opposed to the Trustee demands for information. Perhaps it is a matter of delicate timing whereby information is given prior to its general release or prior to a hearing, but not sooner. This issue must be resolved by the Risk Management Committee. They are faced with a situation today whereby a physician called to give evidence in an enquiry will not be able to do so unless his solicitor is present, and thus the Hospital solicitor must also be present, and we are not able to freely communicate full details. However, there must be an interim compromise available which the Risk Management Committee can identify. Meanwhile, we should be attempting to influence the

> Government to provide legislation which would provide privilege to all internal investigations.
>
> The Trustee role must not be overlooked. Only by constant vigilance and insistence on regular reports can they continue to fulfill their role.

Comment on the Risk Management Committee

The establishment of the Risk Management Committee was a very important and commendable step in the establishment of an improved patient care safety system. It is to be noted that its membership is inter-disciplinary, but it could be more effective, in the opinion of this Committee, if its membership were extended to include other disciplines and broader representation of staff physicians and nurses. We do not think that it is an accurate premise to hold to the view that only chiefs of the services can contribute to the assessment of the quality of patient care and safety and how it can be improved.

It is to be noted that the first meeting of the Risk Management Committee was held in January 1981. That was at the very time that concern was being expressed within the Cardiology Division as to the increased number of deaths occurring in the cardiac wards. This was not brought to the attention of the Risk Management Committee at that time, nor does it appear to have been formally brought to its attention subsequently, certainly not before March of 1981. In response to the queries of our Committee as to why this was so, the Hospital responded as follows:

> The function of the Risk Management Committee is not to replace the normal channels for achieving changes in patient care or treatment but to supplement those channels by adding a broader perspective. It is therefore not in the terms of reference of the Risk Management Committee to look at causes or rates of death if these are considered to be normal.

We think this is too narrow a concept of the function of the Risk Management Committee. It is true that the reviews of the deaths occurring in the cardiac wards within the Cardiology Division did not disclose any known error in the practices and procedures in the Hospital. But the increased number of the deaths in itself was of sufficient concern within the Cardiology Division to have required study on their part. That something out of the ordinary had occurred had not been clearly excluded. Under such

circumstances, in our view, it was a proper matter to have been brought to the attention of the Risk Management Committee which may have been in a position to assist in a broader investigation. In future, in our opinion, if there is anything which would indicate that something out of the ordinary has occurred, even though it has not been clearly identified to be such, it would be appropriate and necessary to have the matter brought to the attention of the Risk Management Committee. We think that the Risk Management Committee should take the lead role in a patient care safety system subsequently discussed.

To be effective, the Risk Management Committee must have ready access to the best information available. Its function is to ascertain whether anything has occurred which ought not to have occurred, with a view to putting practices and procedures in place to prevent their re-occurrence. Such studies have been undertaken and improvements have been made. But as is noted in the internal report on risk management, reproduced above, obstacles have been placed in its way in the obtaining of necessary information. This has occurred by reason of a perceived conflict of interest between the Hospital gathering information for its patient care safety system and the physician whose conduct may be called into question. This is particularly so where the incident may have legal implications.

This conflict or perceived conflict has been accentuated by the decision of the Ontario Court of Appeal in the case of Yepremian et al. v. Scarborough General Hospital et al., reported 110 Dominion Law Reports (3d) at p. 513. In that case the physician, whose negligence caused the injury, was not sued by the plaintiff. The plaintiff sought damages from the hospital. The physician was a specialist on the staff of the hospital, but was not an employee of the hospital. The majority of the Court held that the hospital was not vicariously liable for the negligence of a staff physician who was not an employee of the hospital. If "the hospital has picked its medical staff with great care, has checked out the credentials of every applicant, has caused the existing staff to make a recommendation in every individual case, makes no appointment for longer than one year at a time, and reviews the performance of its staff at regular intervals," the Court held that the hospital has fulfilled its legal duty, and that the patient must seek recourse against the physician.

The majority of the Court went on to make the following observations:

> The Government exercises a substantial degree of control over public hospitals, through Regulations and especially through the hospitals' finances. If liability is to be imposed upon hospitals for the negligence of its medical staff, including specialists, not employed by the hospitals, whether directly or by imposing a statutory duty to provide such services, it should be the function of the Legislature, as a policy question, to decide whether and under what conditions such liability is to attach.

The Chairman of the Review Committee is of the view that it would be appropriate for the Hospital to seek statutory change to avoid the potential conflict of interest. This would result in the Hospital being liable for the negligence of all physicians practising within the Hospital, be they employees or not. The additional potential exposure of civil liability would be, in our opinion, completely compensated for if, by the abolition of such conflict of interest, the Hospital could better undertake its investigation and prevent harm to others in the future. This, we think, would be in the public interest. Furthermore, most members of the public are unaware of the internal relationship between the staff physician and the hospital. It is not unreasonable for the public to feel that they can look to the hospital for recourse if negligent conduct has occurred on the hospital's premises. As in the Yepremian case, many patients for valid reasons are hesitant to sue their physicians even where error has occurred. If the statutory change is made, they would not have to do so in order to have recourse. The patient would still, of course, be free to sue the physician, or the hospital could join the physician in the action, if so advised, but both the hospital and the physician would stand or fall together. The other members of the Committee have reservations about such a proposed statutory charge and think that other solutions should be sought to reduce the possibility of a conflict of interest between the Hospital and its non-staff physicians.

Chapter V

Medical Staff

Part I

THE HOSPITAL FOR SICK CHILDREN BY-LAWS, PART II

Part II of the Hospital for Sick Children By-Laws relates to the medical staff, a portion of which is reproduced below:

ARTICLE X

Section 2. The By-Laws governing the Medical Staff, comprised in Part II of these By-Laws, and the By-Laws governing the Research Institute comprised in Part III of these By-Laws may be reproduced under separate covers but shall form part of these By-Laws and have the same authority and effect as if the same were here included and reproduced in their entirety.

ARTICLE XV: Medical Staff Categories

Section 1. The Medical Staff shall be divided into the following groups:

(a) Honorary Consultants;

(b) Consultants; and

(c) Active Staff.

Section 2. A physician may be honoured by the Board with an emeritus position as an Honorary Consultant because he is:

(a) A former Consultant or member of the Active Staff who has reached the age of retirement as provided for Medical Staff members from time to time by resolution of the Board;

(b) A former Consultant or member of the Active Staff who has not reached the age of retirement, but who wishes, for reasons acceptable to the Board, to retire from active full-time practice; or

(c) A physician, not necessarily resident in the community, of outstanding reputation or extraordinary accomplishment.

Section 3. An Honorary Consultant shall not:

(a) Have regularly assigned duties or responsibilities;

(b) Be elegible to vote at any Medical Staff meeting, or to be elected an officer of the Medical Staff;

(c) Be bound by the attendance requirements for Medical Staff meetings or meetings of any Department; or

(d) Be granted admitting privileges, except under special recommendation of the Committee.

Section 4. A Consultant is a member of the Medical Staff who is so appointed because of his specialized training and experience to give advice and opinion to members of the Active Staff.

Section 5. A Consultant shall:

(a) Give service to any patient in the Hospital when requested to do so by the Chief of the Department or Head of the Division concerned;

(b) Have the privilege of attending his own private patients in the Hospital;

(c) Not be eligible to vote at any Medical Staff meeting, or to be elected an officer of the Medical Staff, and shall not normally be granted admitting privileges;

(d) Not be bound by the attendance requirements for Medical Staff meetings or meetings of any Department but may be appointed to special committees at the discretion of the Committee; and

(e) Be retired on June 30th of the academic year in which the age limit of 65 years is reached.

Section 6. The Active Staff shall consist of all other members of the Medical Staff and shall be assigned ranks by the Chief of the Department as designated in the Regulations.

Section 7. A member of the Active Staff shall:

(a) Attend such patients as may be designed for him by the Chief of the Department in which he holds an appointment;

(b) Attend and be eligible to vote at Department and Medical Staff meetings;

(c) Be retired on June 30th of the academic year in which the age limit of 65 years of age is reached.

(d) Conform to ethical billing practices as approved by the Committee.

(e) Complete the medical histories of his patients in accordance with the Public Hospitals Act, the Regulations made thereunder and the Regulations.

ARTICLE XVI: Medical Staff Duties

Section 1. Each member of the Medical Staff shall:

(a) Undertake such Hospital duties as may be specified for him by the Chief of the Department to which he has been assigned;

(b) Give instruction as is required of him by the Chief of his Department for the training of other members of the Medical Staff, House Staff, Students-in-Training, and other Hospital staff;

(c) Notify the Head of his Division or the Chief of his Department if he is unable to perform any of his duties for any reason.

ARTICLE XVII: Medical Staff Departments

Section 1. The Medical Staff is normally divided into the Departments as shown below. However, Departments may be added, changed or dropped as decided by the Board as advised by the Committee.

1. Anaesthesia
2. Bacteriology
3. Biochemistry
4. Dentistry
5. Genetics
6. Immunology
7. Medicine
8. Ophthalmology
9. Otolaryngology
10. Pathology
11. Psychiatry
12. Radiology
13. Surgery
14. Virology

. . . . .

Section 3. The Chief of a Department shall:

(a) Be responsible through the Executive Director and the Committee for the organization of the Department to which he is assigned, to advise with respect to the quality of medical diagnosis, care and treatment provided to the patients and out-patients assigned to his Department. When he becomes aware that, in his opinion, a serious problem exists in the diagnosis, care or treatment of a patient or out-patient, he shall forthwith discuss the condition, diagnosis, care and treatment of the patient or out-patient with the attending physician, and if changes in diagnosis, care or treatment satisfactory to him are not made promptly, he shall assume forthwith the duty of investigating, diagnosing, prescribing for and treating the patient or out-patient, as the case may be, and shall notify the attending physician, the Executive Director, and, if

possible, the patient or out-patient or their parents or legal guardians as applicable, that the member of the Medical Staff who was in attendance will cease forthwith to have any Hospital privileges as the attending physician for the patient or out-patient. Where he is unable to discuss the problem with the attending physician, he shall proceed with his duties as if the discussion had been held. He shall report such actions to two members of the Committee within twenty-four hours of his action, and shall file a written report within 48 hours with the Committee Secretary who shall report to the Executive Director on the action taken;

(b) Himself or by his delegate, accompanied by members of his staff, conduct regular ward rounds on patients admitted to the care of members of his Department, and/or hold meetings and see that there is adequate review, analysis and evaluation of the work of the Department;

(c) Advise the Executive Director forthwith of any patient who is considered by the Medical Staff of the Department to be classified as:

(i) a chronically ill person within the meaning of The Public Hospitals Act;

(ii) a patient not in need of active treatment; or

(iii) a patient not likely to make any substantial progress towards a recovery with the continuation of active treatment.

(d) Be responsible for the representation of his Department, either in person or by proxy, at each meeting of the Committee;

(e) Initiate and supervise the close cooperation of his own staff in the work of the members of the Nursing Staff and of the Paramedical Staff either assigned to his Department or caring for patients in his Department;

(f) With the concurrence of the Executive Director, have the authority to grant temporary privileges, the extent and limit of which shall be at his discretion, to a qualified physician or surgeon or dentist who is not a member of the Medical Staff, for a period not to exceed thirty days;

(g) Permit the presence of observers in his Department for periods not in excess of thirty days. These observers shall not have any patient care responsibilities and their names shall be notified to the Hospital Secretary prior to their taking up their duties;

(h) Advise the Committee with respect to the quality of medical diagnosis, care and treatment of patients and out-patients assigned to his Department;

(i) At his discretion, divide the Staff assigned to his Department into Divisions, but he shall remain accountable to the Committee for the management of patients delegated to Divisions;

(j) Prepare and file terms of reference and privileges for all staff members;

(k) Be responsible for recommendations of Medical Staff appointments to his Department, and for the preparation, discussion and filing of annual review reports on all staff members as set forth in the Regulations;

(l) Be responsible for the supervision and control of students and for the education of such students;

(m) Be responsible for the management and administration of his Department.

Part II

THE ACTIVE STAFF

For the purposes of carrying out their prescribed functions, the Active Staff is divided into three sub-groups:

a) Senior Staff Physicians
b) Staff Physicians
c) Clinical Assistants

Senior staff physicians in the Hospital have responsibility to two institutions: the Hospital and the University. For their teaching responsibilities they are responsible to the chief of the department, to the chairman of the academic department at the University and ultimately to the Dean of Medicine. For the quality of care rendered to patients and for their activities in the Hospital, they are responsible to the division head or department chief, to the Executive Director and to the Board of Trustees.

This dual relationship complements rather than impairs the objectives of each institution, provided always that there is a clear understanding of the responsibilities involved and of the areas of jurisdiction that prevail.

The strengths of the relationships that exist between the University and the Hospital vary from department to department; it appears to be strongest in paediatric medicine as the Hospital is the primary teaching unit for this activity in the medical school.

Of the approximately 400 physicians who comprise the medical staff of the Hospital, some practise exclusively at the Hospital, in both the ambulatory and in-patient areas. Some are geographically located within the Hospital while others conduct their private practices in the main from outside offices. Some physicians receive their full remuneration from the University and the Hospital while others who practise exclusively at the Hospital receive their remuneration exclusively on a fee for service basis. Some other physicians maintain private practices in the surrounding community areas and suburbs and care for some of their hospitalized patients at the Hospital for Sick Children.

These diverse and sometimes complex arrangements are traditional at most children's hospitals in North America.

Responsible Physician

In a teaching hospital the care of patients is normally carried out by a team of house staff and staff members including generalists and subspecialists as required. It is important, therefore, that at all times an individual physician be clearly designated as the primary responsible physician for each patient. In most instances at the Hospital for Sick Children this primary physician is clearly identified. Some difficulty, or perceived difficulty, in this identification has existed in the largest teaching unit of general paediatric medicine. This concern was expressed in the McGregor Report, subsequently referred to, and as a result a clearer definition of the responsible physician has been instituted. The Review Committee believes that this important change would be further strengthened by a requirement that the responsible physician should not only have to see the patient within a specified period from time of admission, but should

also be required to sign the resident's admission note or write his or her own notes on the admission record at the time of examination.

Selection of Staff

Because the medical staff at the Hospital for Sick Children participate in patient care, education and research functions and because they serve two masters, the Hospital and the University, it is imperative that their selection satisfy the requirements of both the Hospital and the University. With this in mind the Hospital and the University have formulated an Affiliation Agreement in which it is agreed that those members of the medical staff who are to hold both University and Hospital appointments will be jointly selected by members of both bodies. This selection committee recommends to the Medical School and to the Board of Trustees all appointees to the positions of department chief, division head and senior staff.

There has been some criticism with respect to the manner in which selection committees have been established and operated at the Hospital. These criticisms, in the main, have been directed to

1) Too much influence of the University in the selection of chiefs;

2) Too much emphasis on research qualifications;

3) Too little involvement of division or department physicians in the selection process.

The Review Committee does not support the contention of a few members of the medical staff that the appointment of chiefs should be the sole right of the members of the divisions or departments affected. It believes that the input of the University in the selection process is mandatory in this important teaching hospital. It also supports the principle of increased representation on the selection committee by members of the division or department concerned.

The quality and credentials of the chiefs are excellent. A number of the physicians selected and appointed have national and international reputations in research as well as in patient care and teaching.

The Review Committee is of the opinion that the main concerns expressed about the selection process can be attributed to the following:

1) About 15 new appointments of divisional heads and department chiefs have been made over a span of approximately five years;

2) In the main, local candidates were not selected;

3) A feeling that some appointees were "imposed" on divisions and departments without adequate input from staff members;

4) A feeling that the subsequent performance of some appointees indicates that they perceive themselves as representatives of the University and the Administration and therefore do not represent the interests of the division or department.

The Review Committee recommends that the Board of Trustees review the representation and performance of the selection committees with the above comments in mind. It further recommends that, in assessing a candidate's qualifications to serve as a division head or department chief, in addition to qualifications in research, teaching and patient care, careful consideration be given to organizational abilities and the ability to conduct satisfactory interpersonal relationships. These positions require leadership and in order to lead one must be assured of followers. The ability to communicate and interpersonal skills are essential characteristics of true leadership.

Part III

THE HOUSE STAFF

The House Staff consists of young physicians appointed to the medical staff for purposes of completion of their training for licensing requirements or for post-graduate studies.

Categories of House Staff are:

1) Clinical Fellows, who are physicians with specialty qualifications who are undertaking specific further advanced studies;

2) Residents, who are fully qualified physicians pursuing post-graduate training in a specialty;

3) Interns (Resident I), who are medical graduates completing the necessary training for licensing purposes.

Residents and Interns

The majority of physicians receiving post-graduate training in the Hospital are at the resident level. There are a relatively small number of graduates who enter residencies directly without taking a year either in "rotation" or family practice. In paediatrics, for example, there are usually four or five who choose to enter paediatrics directly.

The quality of the resident staff is very good. It is made up of a diverse group coming from many countries. This is especially true in paediatrics. Post-core residents are composed of very experienced individuals, more so than at many comparable hospitals. The orientation of the training role is towards a clear subspecialty role, especially within paediatrics. It is important to note that the residents, in specialties other than paediatrics, who rotate from their parent departments at the University, have relatively limited experience in children's problems.

This places a requirement for even greater supervision over these physicians, as they may have very little or no experience with children. The concern is not with the specific problem that they may encounter, but that their knowledge of the entire child may be inadequate. This was noted in our chart reviews where histories, physicals and follow-up notes made by residents were frequently cursory.

The relationship between attending staff and residents is good. While problems may exist between certain individuals, the perception is that the staff is:

1) accessible,
2) interested in teaching, and
3) made up of good clinicians.

Fellows

The fellowship programs within the institution are primarily for physicians who have completed their general training requirements and desire additional experience in the paediatric aspects of their discipline. Some of these individuals have career goals in academic medicine; however, most seek additional experience prior to entering practice. The programs are in general excellent, highly competitive and useful to the Hospital as well as to the individual.

These fellows are valuable teachers and add significantly to the quality of patient care. The relationship between fellows and residents is usually well-defined on an individual service; however, it is extremely diverse. In our opinion, the Hospital should only fund fellowships in which there are significant patient care supervision and teaching responsibilities in addition to some research involvement. In fellowships that are one-half or more in research, appropriate funding should be obtained.

The fellowship opportunities are among the best in North America and in some instances are world-renowned. There appears to be an appropriate balance between the numbers of fellows and residents.

Part IV

TEACHING

The Hospital fulfills its mission in teaching at the undergraduate level (medical students), graduate and post-graduate levels. As with most programs, the quality varies, but in general appears to be very good. The

undergraduate experience is good. The students are well-prepared to continue their training in the area of their choice.

Teaching assignments are handled at the departmental level. In the case of Paediatrics and most other departments this function is delegated to specific individuals who administer it on a daily basis. Similar arrangements are made for post-graduate training in the larger departments.

COMMENT ON MEDICAL STAFF

There is an intimate relationship between patient care, teaching and research in the Hospital for Sick Children. Concern has been expressed by some that the empnasis, on the part of the active staff, on teaching and on research has been at the expense of patient care. The impact of research on patient care is subsequently discussed, but it is said that because of the time devoted to teaching and research by members of the active staff, there is too much of a dependence on the house staff for the day-to-day patient care, particularly at night-time and on weekends.

It should be observed that the house staff is composed of graduates in medicine, the vast majority of whom are fully licensed to practise in this province. Many of them are already qualified specialists. The relatively few interns are medical doctors, although not yet licensed to practise. They are all well-trained young doctors who, as a result of their recent medical training, are up to date in medical knowledge, but lack experience. In order to advance their medical training, they must be given an opportunity to exercise some judgment. The experience of others is available to them in great abundance at all times within the Hospital.

There is no doubt that in this Hospital, as in all university affiliated hospitals, much of the day-to-day care of the patient is provided by the residents and fellows. This is particularly so at night-time and on weekends. This affords the Hospital the opportunity of providing 24-hour coverage, with fellows and active staff being on call in rotation.

It is essential, therefore, that the house staff be supervised and act under supervision. Equally important is that the house staff be instructed to call for assistance whenever it may be required. Much depends on the willingness of the house staff to do so and the active staff to respond.

We think that, overall, this balance has been maintained. Indeed, there are some who feel that the house staff at this Hospital are not given sufficient responsibility in the decision making necessary in patient care matters.

It must not be overlooked that, although the house staff provide a service for the Hospital, the principal reason for their being there is to be taught. The emphasis on teaching within the Hospital also provides a healthy environment for both the teacher and the house staff in constantly seeking advanced medical knowledge.

However, by reason of budgetary restraints, there is already a reduction in the number of house staff at this Hospital as well as other university affiliated hospitals. Further reductions are anticipated.

The Hospital must plan for the future in the face of this reality. It is comforting to note that the Director of Education is presently addressing this problem and is taking innovative and active steps to meet it. The Hospital must give consideration to additional medical manpower within the Hospital. This may require greater presence of the active staff in the wards, plus a redefinition of the role of other professionals, who could be trained to provide some of the services presently performed by the house staff, so that the quality of patient care will not be impaired.

Chapter VI

The Research Institute

The Research Institute at the Hospital for Sick Children is one of the largest medical research establishments in Canada and one of the two largest paediatric research institutions in the world. In 1982 there were 215 funded research projects, of which 195 were funded externally. There are 79 post-doctoral fellows, 50 graduate students and over 600 individuals associated with the Institute. Virtually every clinical division and department within the Hospital is involved in research to some degree.

COMMENT

The Committee did not review the work of the Research Institute in detail. It is well known that it is very efficiently and imaginatively organized under its present Director. Our focus was as to the impact of the Institute on patient care.

As has been noted previously, there are some who feel that the emphasis on research within the Hospital and the association with the Research Institute have been somewhat at the expense of patient care. Those of that view are of the opinion that too much time is spent by some of the senior staff on research and that research has been made too important a factor in the selection of department heads and chiefs of the divisions.

Ongoing research enables a health care institution to maintain its leadership position. One of the ways in which this is accomplished is by attracting individuals who have already achieved a high reputation in their respective specialties. Many of these individuals are heavily committed to research and, but for the extensive research facilities at the Hospital and its reputation for research, would not accept an appointment there. With few exceptions, however, such appointees have also displayed great clinical expertise, and, on balance, we are satisfied that the research facilities

add to rather than diminish the quality of patient clinical care in this Hospital.

The knowledge gleaned from research is of significant importance in the prevention, diagnosis, and treatment of disease. Research on site allows for an effective and direct transfer of this knowledge from the laboratories to the clinic. The Research Institute provides outstanding staff, who are expert in their field, for consultation on unusual medical problems and provides unique facilities and sophisticated instrumentation and technology that would otherwise not be available in the Hospital. Although the results of basic research are not as immediately transferable to the clinic as those of applied research, in the long run they have an important impact on patient care.

In many instances those engaged in research as well as in teaching are also involved directly in patient care.

There is also a close linkage between university-based and hospital-based research activity. In applied research, in basic research and in programs involving both, there is at present a multitude of investigative cross-involvements that link the Hospital, the Research Institute and the University.

The primary mission of the Hospital is that of patient care, while that of the University and Research Institute is teaching and research. The combined effect of these three institutions, working in concert, has a direct impact on the quality of patient care in the Hospital and, in our opinion, a significantly positive one.

Chapter VII

Clinical Services

Part I

CLINICAL SERVICES ORGANIZATION

To carry out its patient care and organizational responsibilities the medical staff divides itself into specific groups called clinical departments. Each clinical department may comprise one or more clinical divisions and each division may have several sections. Each department is directed by a department chief. Each division is directed by a division head responsible to the department chief. Each section is directed by a senior staff physician responsible to the division head. Staff physicians and house staff are responsible through the senior staff sectional head to the head of the division and ultimately to the department chief.

The clinical departments and divisions at the Hospital for Sick Children are:

Department of Paediatrics

Divisions

General Paediatrics
Cardiology
Endocrinology
Neonatology
Clinical Pharmacology
Nephrology
Allergy
Immunology
Dermatology
Haematology/Oncology

Gastroenterology
Neurology
Infectious Diseases
Chest
Clinical Genetics
Gynaecology
Clinical Nutrition
Medical Education
Medical Out-Patients
Ambulatory Care

Department of Surgery

Divisions

Neurosurgery
Orthopaedics
Plastic
Cardiovascular
General Surgery
Urology
Gynaecology

Department of Anaesthesia

Department of Pathology

Department of Radiology

Divisions

General Radiology
Nuclear Medicine
Special Procedures

Department of Psychiatry

Divisions

Family and Child Care Unit
Adolescent In-Patient Unit
Out-Patient Service

Department of Bacteriology

Department of Dentistry

Divisions

Orthodontics

Paedodontics

Department of Otolaryngology

Department of Genetics

Department of Ophthalmology

Department of Virology

Department of Biochemistry

Divisions

Service Division

Research Division

Special Units

Emergency Medicine

Intensive Care

Part II

CLINICAL CARE OF PATIENTS

The Review Committee examined all the clinical services including Cardiology and Neonatology which are dealt with subsequently in greater detail.

The clinical services offered at the Hospital for Sick Children are those traditionally found at a children's hospital. The program and the medical staff are, in general, excellent and in some instances world renowned.

The Department of Paediatrics (Medicine) is a very large and complex unit. Under the new Chairman, appointed some five years ago, this Department has undergone extensive changes. Eight new divisional heads have been appointed; new Divisions of Clinical Pharmacology, Infectious Diseases and Medical Education have been established; the Divisions of Neurology and Immunology, Haematology/Oncology and Endocrinology have been expanded. More full-time staff have been added and positive academic changes initiated. All of this has improved what was already a very strong department.

The Division of General Paediatrics deals with generalist orientation and ward coverage on the non-specialty paediatric services. It serves patients who range from the very minimally ill to the very sick. The overall quality of care is excellent. A review of charts in this service revealed excellent supervision, excellent planning and an effective unit.

Endocrinology provides a good program that is traditional in a children's hospital. A significant number of the children who receive care or who require hospitalization have diabetes and are insulin dependant.

Clinical Pharmacology is a relatively new division, as has been noted. This is an important evolving specialty of paediatrics, one to which the Hospital will probably have to make additional commitments in the future. The complex interaction of drugs and the resulting complications require this expertise.

Nephrology is a traditional renal unit interacting with Immunology and with Surgery for its transplantation efforts. The program is a good one and covers complex renal disease, dialysis and transplantation.

Allergy is an area that has caused some difficulty by reason of the friction within it and between the Head of the Division and the Chief of the Department. There is a perceived need for a more academic orientation. The major in-patient problem is asthma.

Immunology is a well-recognized discipline with a basic thrust in immunodeficiency disease. The programs have achieved a world-wide reputation for excellence.

Dermatology is a relatively small program which is primarily out-patient oriented, although there are also a number of in-patients receiving care. This area is frequently underemphasized in children's hospitals. This is not the case at the Hospital for Sick Children.

Haematology/Oncology is a very large division presently under the directorship of a new head. The program is of increasing importance since children with malignancies are now surviving for longer periods of time. There is complex treatment involved in both the ambulatory and in-patient setting. This service and Neonatology are particularly demanding on the other services of the Hospital, such as Pharmacy and Nursing.

Gastroenterology deals with all of the illnesses relating to the gastro-intestinal system in very small infants to young adults. The program is well run and has a good staff.

Neurology is a traditional subspecialty section. It deals with the complete spectrum of neurological diseases of childhood from seizure disorders to degenerative disorders of newborns. This division works closely with Neonatology and Neurosurgery.

Infectious Diseases is a relatively new division established after the recruitment of the new chief. This program is excellent in its breadth and its impact on the entire Hospital.

Chest Division is acknowledged to be one of the finest of such services in North America. It has a large population of patients with cystic fibrosis. In addition to its clinical care program, the pulmonary research program is outstanding.

Clinical Genetics is apparently fulfilling its function without a full-time head. The Hospital has been attempting to recruit an individual to run this program for a decade. However, the program apparently meets the clinical needs of the Hospital, although the possibility of much greater interaction with other programs could be met if an appropriate senior individual were recruited.

Gynaecology is a relatively small division interacting primarily with Surgery. The emphasis in the paediatric age group is on ambulatory rather than in-patient care.

Clinical Nutrition is an established service at the Hospital for Sick Children. Its reputation is excellent. Most children's hospitals do not have such a division. The number of consultations for nutritional requirements that we saw in our survey far exceeds the number that are observed in most hospitals. This is clearly related to the fact that this has been a major thrust in the institution for a number of decades.

Medical Education is an important new addition to the Department and relates primarily to the supervision of post-graduate training as well as the organization of the undergraduate program. It is headed by a particularly able director who has given vitality, imagination and enthusiasm to this vital program.

There is a separate Department of Genetics, which appears unnecessary in light of the fact that there is already a Division of Clinical Genetics within the Department of Paediatrics.

The Review Committee does not understand the separation between the Departments of Medical Out-Patients and Ambulatory Care and questions its necessity. We think that these two Departments should be merged with the Division of General Paediatrics within the Department of Paediatrics.

The Department of Surgery treats the entire spectrum of acquired and congenital ailments of children requiring surgical correction. Over the past few years the surgeons have been performing increasingly complex surgery with great success. Many of the section heads and their programs have international reputations. Some of the programs within the Department were among the first of their kind within children's hospitals. The Chief of Neurosurgery was one of the first individuals dedicated solely to the care of children within his discipline. The craniofacial program within Plastic Surgery is one of the pioneering units in the world. The resident and fellowship training opportunities in the surgical divisions are highly sought after. Although consultation between the surgical divisions and the Department of Medicine are frequent and effective, consideration should be

given to mandatory paediatric consultation for all neonates with surgical problems regardless of the complexity of the surgical problems.

The Division of Neurosurgery is involved in the complete spectrum of neurosurgical problems of children, including management of birth defects from myelomeningocele and hydrocephalus to brain tumors.

Orthopaedics in the Hospital for Sick Children is heavily oriented to the correction of congenital malformations. Of special interest is the program involving the management of scoliosis.

The Plastic Surgery Division is again a full spectrum program with the primary craniofacial unit in Canada.

The Cardiovascular Division, which is discussed at greater length in Chapter X of this Report, is a well-established regional program dealing with the correction of the most complex forms of congenital heart disease. It works closely with Cardiology including sharing in-patient space.

The Division of General Surgery deals with problems of complex congenital malformations such as those of the gastrointestinal system, as well as acquired surgical problems including trauma.

The major problems dealt with in Urology are congenital anomalies of the genitourinary tract.

Gynaecology is a small unit with close ties to the Paediatric service.

The Department of Dentistry is divided into Orthodontic and Paedodontic sections. The departmental status of Ophthalmology is based solely on its departmental status in the medical school. Otolaryngology is a high volume, high turnover specialty with a first-rate service. We believe that these services should be included as divisions of the Department of Surgery.

The Department of Anaesthesia is large relative to other comparable institutions. Its orientation is essentially towards the operating room functions of an anaesthesiologist as a result of the large number of operative procedures. There has been some concern expressed that on

occasion one anaesthetist is assigned to three operating rooms. In our opinion, staff anaesthesiologists should at most cover two rooms and, obviously, for any complex patient problems, coverage should be one on one.

The Department of Pathology is made up of sections of Clinical Pathology and Diagnostic Pathology. Important advances have been made under the leadership of the present director and the Department operates in a conscientious and able manner. Much more use should be made of this Department, in our opinion, in the patient care safety system, which is subsequently discussed. The Review Committee questions the need for the Departments of Biochemistry, Bacteriology and Virology to have departmental status. We would suggest that the administration of these programs would be more efficient if they were combined with the Department of Pathology under a broader title such as Pathology and Laboratory Medicine.

The Department of Radiology has a vigorous and effective leader and provides up-to-date modern diagnostic, radiologic procedures. It is important, however, to continue to stress department policy that all x-rays must be double-checked and signed by a staff radiologist before an opinion is rendered. Furthermore, there appears to be room for improvement in the audit process within this Department.

The Department of Psychiatry is composed of three major units, a Family and Child Care Unit, an Adolescent In-Patient Unit and an Out-Patient Service. The program is relatively large for a children's hospital but is most effective.

Emergency Medicine is listed as a separate department in the departmental structure of the Hospital. It is efficient and well-run and functions very effectively, providing special care for very ill children requiring emergency treatment. Although there is merit in treating it as a separate unit for administrative purposes, because of its interaction with both Medicine and Surgery, it is doubtful, in our opinion, that it should have departmental status.

The results achieved by the Intensive Care Unit stand as an example of one of the particular strengths of this Hospital. The results are even more remarkable when one considers that the service functions in a less than ideal environment. A major problem of the unit is inadequate space for the

number of beds. The space allocated is below that required per ICU bed to meet the established norms. Although the Intensive Care Unit requires independent administrative supervision, we question whether it should be set up as an independent department because of its multidisciplinary service functions.

Part III

MEDICAL RECORDS

A random selection of medical records was reviewed for each clinical service in the Hospital. The quality and quantity of recording varies somewhat from division to division and from physician to physician. In all areas of clinical activity the records indicate good management of patients and, in general, notes were clear, succinct and easy to follow. Discharge summaries in most clinical areas are a model of clarity and serve as an excellent basis for reporting to referring physicians.

The Review Committee found some instances where it was difficult to determine attending physician involvement in the patient care process. It notes with approval recent changes made to rectify this identification on the patient records.

The Review Committee had some concerns in respect to the quality of records in Neurosurgery. The absence of notes by neurosurgeons in many instances seriously affected the quality of records and made it difficult to assess the care provided, although there were other indications that the care was good. In Orthopaedics the absence of attending surgeons' notes and signatures made it difficult to assess their participation in patient care although, again, results were judged to be excellent. In Otolaryngology the absence of post operative notes in many instances decreased the quality of the records.

The Hospital has implemented a Problem Oriented Patient Record System in some areas. It appears to be well accepted by the staff. There are still some problems with it which will be corrected with time and more staff familiarity with the process.

COMMENT ON CLINICAL SERVICES

There are advantages to the present system of decentralization of authority in a hospital of the size and complexity of the Hospital for Sick Children with the high degree of specialization that exists. One of the drawbacks of complete decentralization of responsibility is the lack of review by other than the department of the qualifications of the department head and his direction, for example, program thrust, quality of care, training and interaction with other disciplines in the Hospital. Such reviews must be structured to take into account not only departmental activities, but whether or not the department's activities are designed in isolation or in fact are complementary to the objectives of the Hospital as a whole.

The relationships within the medical staff between categories of individuals with special arrangements may result in significant problems in the future, for example, in Ophthalmology, where there is a private practice model within the Hospital without a clear understanding on the part of the patients, physicians and others as to who is the responsible party. Patients are unclear as to whether they are patients of the Hospital or of the ophthalmologist.

The departmental structure is somewhat diffuse and cumbersome. There does not appear to be justification for making small services, such as Virology, Biochemistry and Bacteriology, independent departments. The Review Committee is of the opinion that considerable consolidation of clinical departments could take place, resulting in better control and direction.

In summary, the overall departmental and divisional status is by and large traditional although, in our opinion, there are more departments and divisions than are necessary for the effective running of a hospital. The Review Committee recommends that the Board and medical staff consider a consolidation of departments. An example of such consolidation would result in:

1. A Department of Surgery and surgical subspecialties which would include General Surgery, Neurosurgery, Orthopaedics, Plastic, Cardiovascular Surgery, Urology, Gynaecology, Ophthalmology and Otolaryngology, and perhaps Dentistry.

2. A Department of Paediatrics which would include all the present divisions, plus merging all the medical out-patient/ambulatory care into this department.

3. A Department of Anaesthesia.

4. A combined Department of Pathology and Laboratory Medicine.

5. A Department of Radiology.

6. A Department of Psychiatry.

We believe that such consolidation would provide for better communication and co-ordination.

Chapter VIII

Nursing

Part I

INTRODUCTION

Adequate nursing care is the single most important element in patient care. This is well recognized by the Hospital authorities. In its brief to the Committee, the Hospital made the following comment:

> The achievement of a full complement of qualified nursing staff is a major step in ensuring the Hospital's ability to adequately meet its standards of care. The attainment of optimal levels depends therefore upon the availability of manpower, physical and fiscal resources. These matters are, to a major degree, outside the realm of decision making and choice by the Hospital. While it might appear a simple matter to move funding support from one program to another, the provision of a high standard of patient care is dependent upon maintaining a proper balance between direct care and support services. This function and the allocation of Hospital resources falls within the jurisdiction of the Planning and Program Committee of the Board and its staff support committees. The overall allocation of non-government funds among patient care, education and research activities is determined by the Board of Trustees.

Several sources of data have been used to permit the Committee to assess the quality of nursing care being delivered at the Hospital for Sick Children: interviews and discussions with staff nurses, physicians and residents and users of the services; observations of personnel providing care; scrutiny of patient records and several other forms of documentation such as performance evaluations, job descriptions, assignment and duty hours records, procedure and policy manuals, and standard care plans.

Further reference is made to nursing in Cardiology and Neonatology in those chapters dealing with these two subspecialties.

Part II

ORGANIZATION

A new organizational structure for the Department of Nursing incorporating several changes was implemented in 1982. The essential features of the new hierarchy are as follows. The three top positions in the Department have been upgraded to Associate Administrator (Nursing), Director of Nursing Service, and Director of Nursing Education and Research. Four assistant directors responsible for ambulatory programs, critical care programs, medical programs and surgical programs respectively have been appointed in place of eight area co-ordinators. Two assistant directors are responsible for the evening and night shifts. The Associate Administrator (Nursing) is new to the Hospital, while three of the assistant directors are new to this level of administrative responsibility. Five area co-ordinators have been assigned to the new position of staff assistant, one has left the employ of the Hospital, one became an assistant director and the other is the Director of Nursing Service.

The new structure of the Department creates for nursing a greater and more appropriate voice in the decision-making process within the management team of the Hospital. Moreover, it can provide the Department with strong leadership and an academic and clinical expertise from which to plan and implement new programs and influence more effectively the quality of nursing care. However, two of the assistant directors have no administrative experience and one has been in personnel work most recently. In these cases it may take some time for them to gain credibility with the nursing staff.

The assistant directors fill a key role. They assess the day-to-day operations of their units identifying and responding to trends, problems, difficulties, and inadequate policies or procedures. Their presence at clinical reports, patient conferences, ward rounds, and individual contacts could eventually generate open lines of communication in nursing and an opportunity to liaise and dialogue with members of the other departments and professional groups. Strategies to include supervisory and head nurse

staff in influencing planning and care practices at Hospital and ward levels must be developed.

An Assistant Administrator of Nursing position has recently been added, although this individual actually spends only a very small percentage of his time in the Department. The number of supervisors has been increased from eight to nine. The Hospital continues to employ one staff co-ordinator.

In the Department of Nursing Education, as noted above, the assistant director was upgraded in title to Director of Nursing Education and Research in 1982. There are two major divisions of the Department of Education, one responsible for in-service training and the other for the nurse internship program.

On most wards the staff is made up of a head nurse, team leaders, staff nurses, registered nursing assistants and clerks. This is the typical cross-section of personnel to be found in most teaching hospitals. On some wards teaching team leaders have been assigned and on others clinical instructors are available to perform the teaching functions. Specialized wards, including 7F, 7G and ICU, utilize instructors. There is one clinical specialist working on the cardiology ward and a second in neonatal intensive care.

The functions of all personnel appear clear, although the Nursing Department at this time believes that their efficiency and effectiveness in staffing will be improved through changes now being implemented. Job descriptions for each position in each unit have been developed meticulously. These are thoughtfully and quite skillfully cast in patient-family-oriented terms and reveal an impressive understanding of the goals of nursing care at HSC.

Patient Assignment

The method of "total patient care" assignment is used at the Hospital but this is cast within a modified team nursing system. This means in essence that each nurse carries out the total care for a child, as opposed to other organizational systems in which nurses are assigned to complete particular jobs for several patients while others perform other tasks for the same

patient. For example, in the latter system, one nurse may do all the medications, another the treatments, another bathing and feeding of children and so on. The total patient care assignment method allows for continuity of care, for family/parent contact and full knowledge of all aspects of a child's care which is required for consistency of care. A disadvantage occurs when less qualified or less experienced personnel are involved, since this means that the total care of the child is assigned to that less qualified person.

The so-called team system presently used is often not a team system of assignment as this is used elsewhere. This group of nurses may be as large as 25 persons, as in the Neonatal Intensive Care Unit. A team in this case simply denotes a group of nurses working together on the same rotation in a particular unit. Nonetheless, team leaders are available for relief of nurses for lunch, etc., and to assist nursing staff where necessary.

Team Leaders, Teaching Team Leaders, Clinical Instructors

The roles of teaching team leader, team leader and clinical instructor are currently being reviewed with a view to rationalizing the present complex and inconsistent system which has clearly grown by fiat and circumstance. For instance, team leaders, when the method of patient assignment is essentially total patient care, serve mainly as a promotional device. This level of personnel is to be replaced by senior nurse practitioners, which should provide for a clinical career ladder that is more effective in recognizing clinical expertise.

The teaching team leader appears to have both administrative functions, which one might normally find allocated to assistant head nurses in other settings; and clinical teaching functions, which one might find allocated to a clinical teacher in other situations. Because of these dual responsibilities, the role of these individuals contains a certain amount of ambiguity, nor are they particularly prepared academically for either role. It is our understanding that this position is to be abolished.

Clinical instructors are to be hired in lieu of teaching team leaders. Assistant head nurses will be added to the roster in those areas where they do not now exist. One possibility now being discussed, which seems sound, is that a group of clinical instructors would be hired and be assigned to

"like" wards, for example, to 5F, 5G and 5C, which are Neurology and Neurosurgery. The clinical instructors will report to an educational co-ordinator with one of the latter persons assigned to each of the four areas of Ambulatory Care, Critical Care, Medicine and Surgery and responsible to the assistant director in that area. The present rather incomplete, ad hoc and seldom carried out plan of continuing staff development at the ward level can be markedly improved by a clinical instructor.

Assistant Head Nurses

The need for assistant head nurses in lieu of teaching team leaders and team leaders is further supported by the plan to increase the administrative function of the head nurse, as decentralization and considerable ward autonomy are now being created. Functions of hiring; program and individual performance evaluation; work schedules, budgets and completion of pay cards; maintenance of individual ward statistics used to identify staff patterns; use of relief nurses; monitoring severity of illness of patients; providing nursing knowledge and supervising techniques required; monitoring the use of incident reports; as well as the more general functions of trouble shooting, monitoring care and liaising with other health care professionals and families on a day-to-day basis provide for an unrealistic workload. It is quite clear that the head nurse will give priority to some aspects of the role and will require some assistance with others. It must be noted, however, that the addition of assistant head nurses such as one in Cardiology is not likely to improve the quality of care delivered, especially if restricted to wards which are to be amalgamated. In other wards at least some of these additions are to be offset by a decrease in the number of head nurses as units are merged.

Evening and Night Supervisors

Evening and night supervisors are primarily responsible for ensuring that the quantity of personnel, drugs, other supplies and equipment are available for patient care. In addition, they become trouble shooters and problem solvers and are the chief administrative personnel in the Hospital during these shifts. The Department intends to examine the roles of evening and night supervisors to alter the major focus and function of their activities to patient-care-related issues. One of the objectives of

change will be to promote closer interactions among the supervisors and the day personnel, especially assistant directors of nursing. Another goal is to stress the educational and supervisory aspects of their work with staff nurses.

Decentralization and Combining of Wards

As noted above, decentralization of administrative functions to the wards is taking place. Concomitantly, plans have been made to combine "like" wards, replacing one head nurse with an assistant head nurse. Clearly one or other of these positions (or both) will become a "desk job" but the presence of a clinical instructor should help a great deal. Wards will be moved geographically to permit combining where necessary.

Facilities and Equipment

Renovations are planned in several ward areas to improve the physical plant, and further streamlining is being considered. In July a central storage, cleaning and repair centre was established to maintain "rolling stock" (wheel chairs, stretchers, strollers, IV poles, etc.). It is believed that nursing services would be facilitated through further change in the patient care areas and to this end an extensive and comprehensive plan for building additions and renovations is now being prepared by the Board of Trustees and the Administration.

Stresses and Pressures on Ward Nursing Staff

A committee has been formed to identify, develop, and implement programs to assist nursing staff to cope with the pressures and stresses of working in this complex tertiary care setting. Regular counselling sessions and a bio-energetics program are being explored but no appropriate strategy has been ruled out.

Shared Governance

In 1979 the concept of shared or participatory governance was introduced. This structure provides, in essence, an alternative to other forms of input on behalf of staff and/or nursing management as these are represented through formal associations. This concept of management has as its

objectives the representation of all levels of nursing staff in decision making activities and "to provide an alternative to an adversarial approach in the employee-employer relations."

In the fall of 1981 a committee was formed to evaluate shared governance. The committee identified some disadvantages in the system that was in place. There were difficulties in decision making and implementation, in costing factors or programs and lack of true budgetary control as well as the length of time before recommendations were implemented. Several recommendations were made by the committee involving a re-structuring of the system. The committee further recommended that a quality assurance co-ordinator be appointed to co-ordinate all aspects of the NARvel, SAVE, Nursing Standards, Performance Appraisal, Job Descriptions, Standard Care Plans, and Infection Control programs. These recommendations are in the process of implementation.

COMMENT ON ORGANIZATION

As a system in change, it would appear that neither the nursing administration nor the committee structure has been able, as yet, to establish a clear and well described set of organizational goals for the Department of Nursing or for the individual units. These goals, when developed, should be reflected by the job descriptions of personnel which themselves reflect clear expectations of the performance of various groups of personnel and of individuals at all levels of the system. The new structure appears sound and could certainly be utilized to generate this set of departmental objectives. A comprehensive re-assessment of the structural changes should take place after a two year period when the new nursing roles are being played out. This will allow the assistant directors to evolve their roles and those of other new personnel.

It seems clear that, when decisions such as the one to combine 4A and 4B and the one to create a new organizational structure at the area co-ordinator/assistant director level are made, this should be done with the input and the co-operation of personnel. Just as the leadership at the ward level needs to be strengthened by re-organization of some positions, so it might be said that the decision making process needs to strengthened. When assistant directors or indeed the Director of Nursing Services or Associate Administrator (Nursing) are beginning to plan for a change to

take place, input should be received from all levels at a very early date to identify the most appropriate objective and means to achieving it and the target dates for change should be made known very widely among personnel. The structures are in place to create such dialogue, but, as is often the case in large and complex organizations, they do not always work well. It is true that a certain amount of staff insecurity will exist at a time of structural change or during changing definitions of function or job description. More care needs to be taken to minimize the effect of this lack of security and, most importantly, to utilize staff input in making the decisions. Many changes now being implemented are viewed as through administrative decree and not through participative management. This has had a very demoralizing effect regardless of the potential value of the change itself. The transition on 4A and B to a combined ward was seen as unnecessarily disruptive and inadequately planned, thus jeopardizing patient care. Associated with this issue is the feeling that those moved out of positions through change have not been dealt with in a compassionate way.

The system of shared governance will suffice only if it can be viewed by staff as allowing real freedom of expression and solution of the professional problems and concerns of both groups and individuals. There is a feeling that "they" don't really care. "They" are apparently members of nursing administration, including on occasion the head nurse, and/or members of the medical and house staff. Considerable resentment lingers towards those who "don't listen" and do not seem to respect their judgments and opinions about patient care needs. While such concerns predominate in certain areas, they are fairly endemic to the Hospital. Morale is thought by some to be very poor. The new organizational structure must address itself to this feeling of discontent amongst some of the staff, and more care must be taken in the process of implementing change if morale is not to suffer.

Perhaps the new organizational structure will militate against any strong movement, but more care in the process of implementing change will be crucial. On the other hand, the new structure is still suspect and must be successful in appearing responsive if this difficult period is to be concluded.

Part III

STAFFING: QUALITY AND QUANTITY ASSESSMENT

Quality Assessment

Nurses are evaluated by the head nurse three months after joining the staff. If the individual's performance requires upgrading, a six-month evaluation is performed, again by the head nurse. All staff are evaluated on an annual basis thereafter. The evaluations appear to be carefully done and are probably very helpful in the ongoing improvement of staff performance. A sampling of the evaluation records of nursing personnel reveals that there are two areas commonly reported to be ones in which the nurse or nursing assistant needs to improve. These are:

1. Documentation: usually relating to the nursing care plan or problem oriented medical records.

2. Problem solving and use of the nursing process.

In addition to the performance evaluation mechanism to identify the quality of work of individual nursing personnel, the Department employs a tool to measure the quality of nursing care. Called SAVE (Selected Attribute Variable Evaluation), this tool uses direct observation and documentation to determine the quality of care received by a child. Two nurses working together can determine, in approximately thirty minutes of observation, the extent to which the care provided meets the accepted criteria. The plan calls for each nurse to perform two such evaluations per month but this goal is not always met. It is used by the team leaders and head nurses to monitor care.

SAVE is used in conjunction with a second tool, NARvel (Nursing Attention Requirement Level). This tool is designed to measure the quantity of direct nursing care required. It reveals the estimated amount of nursing required for a patient, and thereby the workload per ward, through a system of patient classification. Validated against timing studies, it will forecast nursing care needs for a 24-hour period. The NARvel tool has been

used to generate standards of staffing for each ward. This estimated quantity of care needed per ward can then be compared with the staffing provided on a daily basis, to generate data revealing the extent to which under or overstaffing is occurring. These tools have not proven satisfactory for the ambulatory care areas where a Multidisciplinary Ambulatory Quality Assessment tool is being developed.

Quantity of Staff

The present complement of nursing staff is 1,133 with 15 unfilled positions at the time of writing. Over the past three years there has been a net gain of 10 head nurses (Operating Room), 7.5 team leaders, 49.5 registered nurses, 3 instructors, and 3.5 other personnel in the ward areas. Partially offsetting these increases is a net loss of 38 registered nursing assistants. The average amount of paid time for personnel in the Department of Nursing throughout the Hospital runs between nine and ten hours per patient per day.

There is a group of individuals providing nursing support services. They fulfill such functions as infection control, nurse specialists, TPN and "Ostomy" nurses. In essence, these nurses are not assigned to any particular unit or department. Within this group of nursing support services, there has been an overall increase in staff from nine nurses to 10.8 nurses with the one RNA remaining constant.

Some changes have also taken place in the nursing pool. This is a group of RNs available to fit in where required within the daily staffing pattern. The per diem nurses number the equivalent of 19 full time positions, a decrease from 64 in 1980 and 66 in 1981. This decrease follows from the policy of the new nursing administration, whereby the use of per diem nurses is kept to a minimum. Nevertheless, the Neonatal Intensive Care Unit remains a very heavy user of per diem nurses, retaining over a year the equivalent of four full-time nurses; this represents a decrease from 8 in 1980 and 11 in 1981.

The wards are of varying sizes. The largest ward is the new Cardiology Unit merging 4A and 4B into 42 beds. Next in line are the Neonatal Intensive Care Unit with 37 beds (but an average census over 40); Neurosurgery 5G, with 32 beds; and 4D, Infant Medical, with 30 beds.

Eighteen wards have between 20 and 30 beds and the remaining six areas, fewer than 20 beds.

Data accumulated using the NARvel tool (Nursing Attention Requirement Level) which predicts the amount of direct nursing care required, when compared to the actual staffing supplied, reveals the degree of under or overstaffing. An analysis of selected two-week periods shows that the Hospital as a whole has been generally understaffed during 1980 and to August 1982. Although data for all wards and for all time periods are not readily available, a sampling of two-week periods reveals that 6A (General Surgery), 7G (Neonatal Intensive Care Unit) and ICU have been substantially understaffed during 1982. In contrast to these data, 4A has been overstaffed with the exception of three sets of readings (4A and 4B still separate at that time).

Studies for re-timing of NARvel are in progress and preliminary findings show more time is being spent in direct care than in previous readings taken two to four years ago. This in turn suggests that understaffing will exist with the staffing standards and complement as set and now in use to generate the staffing data. Clearly the workload on these wards, on the above-mentioned ones, is greater than the standard staffing plan as set some time ago.

The turnover rates for the Nursing Department have been fairly moderate when compared to reports from other acute care institutions. It must be remembered, however, that with a staff of this size even a relatively small turnover means a large number of persons in absolute terms. As of the end of July, the rates for 1982 are substantially lower than in previous years, and although many changes normally occur in the autumn, the RN turnover rate should remain below that of the past three years.

COMMENT ON STAFFING: QUALITY AND QUANTITY ASSESSMENT

The present method of evaluation has many strengths, but the format is somewhatunwieldy and includes several scarcely used areas for comment. A less focused and shorter procedure could be used more effectively if a concentrated and continual program of indoctrination in its use were part of the overall plan. A sampling of the completed forms reveals that improvement in performance does occur in some instances but there is

insufficient evidence as to the basis of conclusions about either the original or subsequent appraisals. The need for more clinical expertise in several areas is apparent, including working with families and providing leadership and analytic skills in nursing practice.

The SAVE and NARvel tools are unique and generate considerable data about the appropriateness of the staffing in each ward. They will only be a complete answer, however, if an updated method of determining the nursing input needed for indirect care is computed. Moreover, since the re-timing procedure recently completed will almost assuredly reveal that the amount of care required is increasing beyond the present staffing levels and since the quota of staff has been set unequivocally, a continual discrepancy will exist. This can be demoralizing to staff and some effort will have to be made to determine areas of priority in the provision of care. Clearly, the tool needs to be improved, to be used in a different way or to be replaced by an alternate mechanism.

The crucial criticism of the SAVE and NARvel system, however, is in the failure of the nursing management team as a whole to utilize it effectively in planning and assigning staff. There are exceptions to this at the ward level, but a lack of understanding of the use of these tools to improve the quality of care is common.

It would appear that the size of the wards is manageable, whether or not of optimum size, but at least one ward, the Neonatal Intensive Care Unit, is too large in numbers of staff and numbers of patients to be managed effectively and efficiently under the present system. The combination of wards 4A and 4B seems sound, as does the development of an intermediate care area in Cardiology. Since this area will not increase the total number of beds available, staff should be capable of managing the combined ward effectively, given that an assistant head nurse is appointed and staff assigned to either 4A or 4B rather than to patients on both wards at the same time. It will be very important that the intermediate care area <u>not</u> be used as an intensive care area, a function which must be left to the existing ICU. At the time of writing, guidelines for use of the area are not developed. A review of the relationship of medical teams to nursing teams should be undertaken on 4A/B.

It must be borne in mind that in all areas the amount of staffing required is related to the quality of the staff. It has been the experience in some hospitals that an upgrading of the educational qualifications of staff, including managerial, clinical and general duty personnel, as well as more sophisticated and comprehensive educational programs, can improve the quality of care where amount of staff remains constant. It has also been shown repeatedly that there is no change in the amount of direct care rendered when staff is increased beyond an optimum number. Rather, more indirect and more ancillary activities result.

The staff complement overall appears satisfactory but some re-distribution may be in order. A plan to take from wards which appear overstaffed and add personnel to wards such as Orthopaedics, Neonatal, ICU and PAR (Post Anaesthesia Recovery) should be considered.

Part IV

PATIENT CARE TOOLS

A number of mechanisms exist with the objective of standardizing the quality of nursing provided.

a) Nursing Care Plans

The Manual of Paediatric Nursing Care Plans, prepared by the Hospital and published in 1979, is now being updated. This is an excellent source book for ward personnel for what are termed Standard Careplans. The document outlines the usual care plans associated with specific conditions or treatments. It details long- and short-term goals and the nursing actions usually required for their achievement. In general it appears that there is sufficient information in the careplans to permit a nurse unfamiliar with a given condition to provide safe, intelligent nursing care. However, staff are aware that the standard careplans do not obviate the need for an individual care plan being prepared for each patient since each patient has

individual reactions, difficulties, and strengths. Thus additional actions/care might be required to supplement or replace part of the standard careplan. It is in this latter respect that variation exists in terms of the quality of the nursing planning process, that is, in the development of unique care plans.

b) Nursing Histories

Similarly, a goal of the Nursing Department is to develop a unique nursing history as a background for planning care for each patient. These are not always completed in a consistent manner and effort is being expended to improve the comprehensiveness of the histories. This history is crucial in providing the context in which a plan for care can be developed. It also provides for an initial parent contact which can set the stage for the parents' future role in, and understanding of, the care provided for the child.

c) Procedure Manual

A procedural manual which is very detailed and well developed is being updated at the time of this review. In general, the procedures are maintained in a highly relevant state of usefulness. There are apparently some exceptions to this rule at the ward level, for example, the Neonatal Intensive Care Unit. In some wards indexing is poor. Since updating is an almost constant process, problems seem to exist in maintaining correct references to texts containing further details.

d) Charts and Charting

Although the SAVE mechanism of assessment of care incorporates a critical review of the patients' charts, the Department believes there is a further need to create a system of retrospective chart audit. Two head nurses are presently examining this area and intend to make a proposal this year. Some concern has been expressed by the Medical Records Committee with respect to the use of the Problem Oriented Medical Record method. The Patient Care Committee, however, has re-affirmed the necessity to continue to use and improve the POMR method of charting medical and nursing notes.

COMMENT ON PATIENT CARE TOOLS

Nursing care plans, including the Standard Care Plans, nursing histories, and procedure manuals are valid and useful mechanisms to create and maintain a high quality of care. There is wide variation, however, in the extent to which these are utilized. The knowledge of nursing care to complete them in a comprehensive manner, so that a consistently high quality of nursing care results, is not always available.

Part V

EDUCATIONAL PROGRAMS

a) Orientation

Each new member of the nursing staff participates in a general orientation program which combines class time and clinical time on the ward to which the nurse has been assigned. The program includes paediatric nursing principles, HSC policies and procedures and hands-on experience with the equipment. In addition, in most units each new nurse receives an orientation of one week in her own unit. Many areas have organized clinical experience and some provide teaching in paediatric specialties. In specialties, an additional two or three week period, over and above the two week general orientation program, is provided for unit orientation.

b) Cardiopulmonary Resuscitation

Each new nurse receives CPR instruction, with an emphasis on paediatric resuscitation, after three months of service. This plan appears to be carried out effectively and efficiently.

c) Nursing Rounds

Nursing rounds are described as projects of the general duty staff and are to be held monthly. Each ward in turn selects a topic and presents to a general gathering of nursing staff. While it is suggested that this allows nurses from different areas of the Hospital to learn about a variety of conditions and circumstances, rounds are not always well attended.

d) Conferences

Nursing conferences are held throughout the year. Single-day conferences are based on needs articulated by the nursing staff and allow participants to explore topics in depth. Three or four of these are held annually and each conference is repeated once. Specialty conferences are developed mainly for paediatric nurses practising outside the Hospital. Nurses in specialty areas at the Hospital are actively involved in planning and presenting the materials.

e) Leadership Programs

Nurses who show leadership potential are recommended by their head nurses to take the five-day leadership program. This program is geared to providing preparation for the team leader role in the Hospital. A variety of management and interpersonal relations topics are covered.

f) Internship

A new program was initiated in 1982 whereby three times a year approximately 20 nurses interested in working at the Hospital for Sick Children are admitted to an internship program. These interns become employees of the Hospital and receive 80% of the starting RN salary. Including orientation and regularly scheduled classes, approximately 20% of the interns' time is spent in clearly defined educational activities.

Interns rotate on two or three units, nursing different age groups and specialties during this 24-week internship. During the 80% of the time spent providing nursing care to patients, the interns are an integral part of the ward nursing team, working shifts and receiving assignments at the discretion of the head nurse. There is some choice of assigned areas and

the final months may include assignments to highly specialized areas and/or supervised team leader or nurse-in-charge experience.

New graduates, experienced graduates with no paediatrics experience, and experienced nurses who have been out of the work force more than five years and who have completed a refresher program are recruited to the internship. The overall objective of the program is to prepare RNs to provide skilled paediatric care to patients of different ages and with a variety of conditions.

COMMENT ON EDUCATIONAL PROGRAMS

The number of staff and the efficiency and effectiveness of the administrative system, as well as the leadership provided by incumbents of these positions, are only part of any plan to guarantee a high quality of care. There are two additional routes to improving the nursing staff performance at the Hospital. One lies in the increased academic qualifications of those hired for work at the Hospital. The other lies in the full and improved utilization of the clinical educational programs which are presently in place.

Some paediatric hospitals of similar complexity, for example, the Boston Children's, the Children's Memorial Hospital in Chicago and the Montreal Children's, are now actively recruiting only baccalaureate graduates to all nursing positions. The Children's Hospital of Philadelphia requires a B.Sc.N. degree for appointment to a head nurse position. Paediatric hospitals have led the way in this trend in nursing. While there is an acknowledged difficulty in recruiting these persons in sufficient numbers in both Canada and the United States (given that only about 10% of the nursing population has a baccalaureate degree), the complexity of the work performed at the Hospital for Sick Children requires that priority must be given to attracting persons holding a degree in nursing. Some 25 years ago many head nurses at HSC had at least some university preparation, including some with degrees. Twenty-five years later the situation has changed. A world class hospital needs more than a world class medical staff. It needs a world class nursing staff. There is every evidence in the literature that the quality of the nursing care given in a unit is in direct relationship to the quality of the leadership provided at the head nurse level. The type of training required for leadership comes primarily with univer-

sity preparation, assuming clinical experience. The NUA course and other similar plans are no longer suitable compromises or replacements in the complex urban teaching hospital. They are useful stop gap measures. Head nurses at HSC should all have a bachelor's degree in nursing at some future date. At the present time fewer than 9% (100) of the RNs at the Hospital hold a degree. There are 33 head nurses, excluding the Operating Room, and, of these, six persons hold a baccalaureate. By the same token, it would be fair to note that there are probably more persons filling team leader and general duty positions holding degrees (80) than there were in the past. HSC does compare very favourably in the proportion of baccalaureates on staff with other Ontario hospitals as revealed in a survey conducted in 1980. It was the second highest of hospitals reporting at that time. However, such comparisons are not useful in a paediatric hospital with an international reputation of excellence. It should only be compared with other similar hospitals in North America.

A general upgrading of staff to the RN level from the RNA level has been noted above. Similar long range plans should be implemented immediately requiring that a degree in nursing be completed by a pre-determined target date for persons remaining in the head nurse or higher position. In a few special instances where an individual is very expert as a practitioner, a degree in a related discipline could be accepted in lieu of a nursing degree.

The second road to quality nursing lies in the educational programs which have been established at the Hospital. These should be considerably strengthened and further developed.

Internship Program

The present internship program is a positive step toward preparing qualified paediatric nurses. Undergraduate nursing programs are general in nature and include about eight weeks (outside of elective experiences) in this field. However, the usefulness of the program can be maximized through placing it in a more suitable setting. This should preferably be accomplished through articulation or affiliation with college and/or University faculty who may hold appointments at the Hospital. The academic and experiential basis of the program can be integrated if the program is placed more firmly within the academic context while not losing the

clinical orientation required. It is this clinical work which is fundamental to the type of specialization needed. The University should have a significant input in the program for baccalaureate graduates. Ministries of Education and Health may need to be involved in the funding arrangements. The present clinical experience is completely separated from the educational days and may or may not have much relationship to the theoretical content. It provides the person with less transferable knowledge than is desirable as an educational experience.

All diploma school/college graduates who have minimal or no paediatric experience following graduation should be required to complete the internship program as a qualification for employment as a staff nurse at the Hospital. Potential staff holding nursing degrees probably need a shorter and modified version since many issues and topics included in the present program are part of the clinical experience and knowledge base provided in most degree programs today. Certainly, experience related to observation and evaluation of paediatric patients and their families; physical care needs of various ages; caring for seriously ill and chronically ill children and their families; and an overview of complicated procedures, for example, TPN and tracheotomies; probably could form the basis of an abbreviated program for baccalaureate graduates. In addition, challenge tests might be devised for potential applicants at both diploma and baccalaureate levels to ascertain if the total program or only parts thereof are required for the individual. New graduates and especially those from diploma programs require the confidence and the security which can be gained through the acquisition of further knowledge and expertise required by the situation. The present program is probably too short and not sufficiently educationally sound to result in their reaching this level of ability.

Orientation and Staff Development

The orientation program in specialty areas does not appear to be adequate given the quality of some of the staff being recruited. It may suffice if it is to be accompanied and followed by a more vigorous and comprehensive ongoing staff development program. The orientation has been described as a very good initiation to the Hospital, even to areas such as Neonatal Intensive Care and Cardiology, to list only two of the highly specialized units. The short program appears to work quite well on more general units.

However, as individuals begin to work in more specialized areas they need ongoing supervision and assistance which isn't always available to them. Much of the staff development on the busy wards is on a day-to-day ad hoc basis. This means that the same material may be covered many times and this is clearly an inefficient way of proceeding. Staff development in general needs considerable strengthening.

Clearly this program will be affected by change in the criteria of employment. If experience in paediatric nursing and/or completion of the internship program is required, the orientation program will be altered to articulate these policies. Likewise, staff development can be significantly reduced and geared primarily to new developments as they occur. Thus the addition of personnel to increase the size and availability of the internship program can be somewhat offset by the reduced need for day-to-day monitoring of care by a clinical instructor or head nurse.

Part VI

RELATIONSHIP OF SERVICE AND EDUCATION

Perhaps because of the very nature of their differing objectives, nursing service and nursing education appear at this time to have some problems in interacting in a positive way. This is a common problem in hospitals but it has been solved in many situations. The new clinical instructors, whose role by very nature of the need will be largely in the staff development program and the day-to-day problems and developments in the ward situations, should be responsible to the education co-ordinators and hence to the assistant directors in service but retain close contact with the Department of Nursing Education through formal weekly conferences and formal as well as informal planning of staff development and other programs. It is mandatory that the educational aspect of their role be nurtured, promoted and reinforced. This structure would tend to bring the two major sections of the Nursing Department closer together.

INCIDENTS

The past structure had certain weaknesses which made the reporting of unusual incidents, or the need for innovative directions or new plans and procedures, difficult to identify. Although incident reports are frequently used and probably are completed in most situations of known error, serious problems of a nature which do not meet the usual definition of an "incident" can be ignored. The appropriate administrative nursing personnel who would presumably set up a system of inquiry into problematic issues and occurrences may not have been advised, or may have been advised too late. Perhaps the new structural arrangement of assistant directors having a considerable presence on their ward units, consistently monitoring the quality of care along with the ward personnel, will go a long way towards resolving this dilemma. Reports have not been well utilized in assessing deterioration in the quality of care nor in all instances where they could have been used for planning and problem identification purposes. It may be that the completion of an incident report is thought to remove the onus from the individual or individuals committing an error. Follow-up to these incidents may be oriented primarily to salving the conscience and guilt of the individuals committing the mistake. While this is necessary to some extent, and will tend to create a situation in which mistakes are indeed reported, it may mean that mistakes are cast in a less serious vein and are perceived as having less serious consequences than they may indeed have. Clearly this is an area where individual professional responsibility and commitment must take over. Given that many individuals on the ward have a somewhat short and quite technologically oriented preparation in nursing, it probably behooves the organization to try to find ways of incorporating this professional responsibility into the day-to-day activity of nursing personnel through in-service programs, and, probably more importantly, staff development on a day-to-day basis.

SPECIAL PROCEDURES

The College of Physicians and Surgeons and the College of Nurses have established an Advisory Committee for identifying those acts in the practice of medicine which can be delegated. Recommendations from this Committee go to the Councils of both Colleges and the Boards of the Ontario Hospital Association, the Ontario Medical Association and the Registered Nurses Association of Ontario. When agreement is reached, the two Colleges

approve the procedures for delegation. The Hospital may then select from the list of approved procedures those which it wishes to delegate.

The Board of Trustees, through the Medical Advisory Committee, has approved the transfer of certain procedures from medical staff to specially trained nursing and technical personnel. These specific procedures may be performed by the nurses only in the "designated areas" listed after each procedure. Some special procedures may be performed throughout the Hospital but only by designated members of nursing staff. In either case a special procedure may be performed only by a nurse who has a certificate for that procedure issued or renewed within the past year. It is the responsibility of the nurse to maintain competence in the procedure at all times.

There is some interest in and need for the transfer of procedures additional to those presently listed by the Advisory Committee. These procedures would be performed only in selected areas, as in the present system. Most specifically, nurses in the Neonatal Intensive Care Unit, the ICU, and Oncology could reasonably be trained to perform additional tasks. Representation to effect this change needs to be made to the Advisory Committee. It will be important to ensure that there are sufficient nursing personnel to assume the responsibility for these additional functions and that they are not simply added to an existing heavy workload.

NURSING RESEARCH

At present, research in the practice of nursing is not developed in the Hospital. This is in sharp contrast to other centres where, although nursing research is in an embryonic state, small studies or surveys are relatively commonplace.

However, the Department is committed to the development of a nursing research program. Discussions are under way with the Faculty of Nursing at the University of Toronto to support research conducted at the Hospital for Sick Children by faculty and graduate students. In addition, a full time nurse researcher will be appointed to facilitate the development of nursing research projects conducted by staff.

COMMENT

The philosophy of the Department of Nursing is based on a comprehensive model of care and is associated with perceiving the child within the context of family needs and dynamics. The fundamental goals of the Department are "to give skilled and conscientious physical and technical care to patients" and to provide "sensitive psycho-social care to patients and to their families."

The changes being implemented as outlined above are commendable. In the main they are creative, logical and thoughtfully determined and can have a major impact on the quality of nursing care. As is to be expected, and from the foregoing, there are many areas in which we think improvements can be made. However, at present, we believe that overall the nursing care is of a high quality. The goal of this Hospital has been, and must be, to provide the very highest standard of care. We believe that the nursing personnel do strive continuously to meet that objective. The effort must be to constantly strive not only to maintain the present quality of nursing care, but also to see that it is improved. There are other facets of the work of the Department which need to be studied if such an objective is to be obtained.

Chapter IX

Ancillary Support Services

In the Hospital for Sick Children there are several ancillary support services. Some of these have a direct impact on the quality of patient care and others have an indirect impact. However, they are all important as they contribute to the complete patient care service. Reference is made hereunder to some of those services which are not otherwise referred to.

LABORATORY SERVICES

Laboratory services at the Hospital for Sick Children are provided by several separate and autonomous departments: Biochemistry, Microbiology, Virology, Haematology/Oncology and Pathology. These departments are separated both physically and functionally. Each department carries out research, service and education roles and has its own fellows and graduate students.

Within the Department of Biochemistry, test results are generated by computer at 4:00 p.m. daily and delivered to the floors. Results indicating toxicity are telephoned immediately. The other laboratories deal with test results in a similar manner. Therefore, unless a particular test is one that requires a greater length of time to perform, the results should be communicated to the floor within 24 hours.

Within the Department of Biochemistry there has been established a Therapeutic Drug Monitoring Program. This program is extremely valuable in that it provides a method of determining whether a child is receiving an appropriate drug dose. This information is transmitted to the physician, who will presumably adjust the dose if this is indicated. The Drug Monitoring Program recently carried out a study to determine the effectiveness of its mission.

One would expect that a high percentage of patients being treated with a drug that is monitored by the program would have an assay done, either on admission or shortly after a patient was placed on the drug. This was not found to be the case. In addition, the results of the study indicate that appropriate adjustments to the drug regimen received by a patient are made in approximately only 40% of the cases where adjustments are indicated. The Committee is unaware of whether there have been any adverse effects in those cases where such adjustment has not been made.

The importance of a program such as the Drug Monitoring Program cannot be overstressed. However, its usefulness depends on the appropriate utilization of the information that is generated. In the United States, this is brought about by clinical pharmacists whose function is to move between the lab and the floors and ensure that appropriate adjustments are made by acting as consultants to the physicians. Currently, there is no one acting in this capacity at the Hospital for Sick Children. The Review Committee believes that such individuals would render the program more effective. We are informed that the program requires two clinical pharmacists to handle the work load that the program generates.

Laboratory services provides an essential support service to the clinical services in the Hospital. The information generated is necessary for accurate diagnosis and treatment. This information must be transmitted accurately, efficiently and rapidly. Currently the information system used by the laboratories is poor. An integrated response and information system is non-existent. The addition of new clinical departments places an increased burden on the laboratories that cannot be discounted. Additional clinical services require additional assays and tests to be run by the laboratories. Without increased staff and facilities to meet these needs, these necessary procedures either cannot be performed or can be performed only at the expense of other important and necessary tasks.

The Review Committee is of the opinion that laboratory services at the Hospital for Sick Children are run by competent and dedicated scientists. However, the organizational structure which segregates these departments impedes the efficient transmission of information. The laboratories are fragmented physically and with respect to responsibilities. In addition, it appears that the laboratories, as one of the support services in the

Hospital, have been somewhat neglected in the expansion of clinical services.

RESPIRATORY TECHNOLOGY

The Respiratory Technology service carries out several functions, primarily in the care of the critically ill patient. The respiratory technologists assist in monitoring, evaluation and treatment of respiratory and related disorders; assist in the transport of the high risk newborn infant; and design, operate and maintain respiratory care equipment. In addition, the service provides instruction to medical and nursing staff on the application of respiratory care devices, techniques and procedures; educates patients and families in the use of home care equipment; and provides the paediatric portion of the second year training program for student respiratory technologists.

Currently on staff there are nine respiratory technologists plus one clinical instructor and the director of the service. There is one opening for a respiratory technologist. The coverage is daily from 8:00 a.m. to 8:00 p.m. with a respiratory technologist on call from 8:00 p.m. to 8:00 a.m. via long range bell boy. Respiratory technologists are scheduled on the ICU and 7G (Neonatal Intensive Care Unit) during the 12-hour day shift. Due to staff shortage, other hospital areas are not covered unless a technologist is called to solve a particular problem.

There is a large demand for respiratory technology involvement in patient care by medical and nursing staff who recognize the expertise of the technologists in dealing with respiratory and related disorders and in handling the specialized equipment used in treatment. However, because of staff shortage, the program is unable to meet these needs and is unable to provide 24-hour coverage. This results in inconsistency of coverage and has also resulted in an inability to provide the job scope available to respiratory technologists in other centres. As a consequence there is increased job dissatisfaction, evidenced by the high turnover among respiratory technologists since 1979. A further consequence of inadequate staffing and clinical exposure is that the program does not meet the national standards in the training of respiratory technology students, and it is likely to lose its accreditation status effective Spring, 1983.

This would be a most unfortunate occurrence. It would be a blow to morale and would reflect poorly on the Hospital as a whole. Respiratory technology students would not receive any paediatric training, which would result in an inadequately trained pool of prospective employees. The teaching function promotes a higher quality of departmental staff development.

The Review Committee is of the opinion that the Respiratory Technology Program provides an important service. If this program is diminished, an increased burden will be placed on the medical and nursing staff for which they are not adequately trained. Faced with a future in which cutbacks are likely in the number of residents, the Hospital should attempt to provide increased support by specialized technologists such as respiratory technologists.

PHYSIOTHERAPY

The complement of the Department of Physiotherapy is 22.1 full time equivalent positions. This is composed of a full-time director, an assistant director who is senior in the service area and in ICU, six senior physiotherapists assigned to: the Intensive Care Unit; the Cystic Fibrosis and Medical Chest areas; Orthopaedics; the Burn Unit and Plastic Surgery; Neurology and Neurosurgery; with the sixth position divided half time between Neurology Out-Patients and Sports Medicine. There are ten full-time staff therapists and two half-time staff therapists, one each in Sports Medicine and Oncology. The additional 2.1 staff therapist time includes a 0.6 time person in Orthopaedics and 1.5 full time equivalent positions composed of 14 persons who work on a part time schedule.

The staff are relatively well trained with 19 having Bachelor of Science in Physiotherapy degrees and 11 having diplomas in Physiotherapy.

Full coverage is provided from 8:30 a.m. to 4:00 p.m. Monday to Friday and from 4:00 p.m. to 8:00 p.m. Monday to Friday. There are two therapists who treat very ill chest patients in the ICU, 4AB, 6D (Cystic Fibrosis) and the Medical Chest areas. As of this fall, all new Canadian physiotherapists require a baccalaureate degree from a Canadian program of physical therapy, physiotherapy, or rehabilitation that has met the accreditation standards of the Canadian Physiotherapy Association.

The Department believes that several additional physiotherapists are required to provide full service. There is no indication as to whether or not any of these increases have been or will be met. Space in the Department of Rehabilitation Medicine is presently filled to capacity. An increase in physical space would be essential to accommodate an increase in the service provided.

The Department has provided a set of statistics projected to 1985-1986 and to 1990-1991. The projections suggest a 1.6% increase per year in in-patient attendances and a 23% increase per year in out-patient attendances.

The nursing staff believe that physiotherapists ought to be assigned to the neonatal wards.

OCCUPATIONAL THERAPY

Concern was expressed to the Committee that there was an insufficient number of staff to cope with the demands essential for the projected service requirements of the 1980s. The volume of out-patients has increased 37% in treatments and 32.2% in patient hours from April 1979 to July 1982. During this same period of time the volume of in-patients remained constant with increases of 2% in treatments and 3% in treatment hours. Extensive waiting lists exist, for programs operant within the child development clinic/developmental evaluation unit, of six to nine months for an initial assessment. Further constraints are placed upon other areas due to insufficient staff time although expedient and improved services have been requested by the physicians responsible for clinics. There is also a belief in the Department that inadequate coverage for in-patient areas 7AB, 8A and ICU has created excessive delays in attending to referrals, sometimes as long as one week.

CHAPLAINCY

There are four major services provided by the Chaplaincy Department. They are as follows:

1. Pastoral care and counselling to parents and their families;

2. Staff Support (meetings with staff individually or in groups);

3. Liaison between the Hospital and denominational chaplains, community clergy and churches;

4. Education (training for theology students and clergy).

In addition, the Department provides leadership at conferences, workshops, etc., and advises on religious and ethical matters.

Essentially the service is confined to the normal Monday to Friday working week, 9:00 a.m. to 5:00 p.m. Someone is available on call, however, 24 hours a day, seven days a week. Students provide duty in Emergency seven days a week from 10:00 a.m. to 11:00 p.m.

As with so many of the other support services, staff do not believe that the evening and weekend coverage from this department meets the current needs of patients and parents.

FOOD SERVICES

This is a large department within the Hospital responsible for the feeding of all patients as well as the staff utilizing the cafeteria.

Six dieticians perform solely management functions. The director and assistant director are responsible for the staff of 160 persons and the supervision of all food service functions. An additional dietician co-ordinates the training of all food handlers such as cooks, chefs, supervisors and dietetic interns. The remaining three persons act as middle management in the operation of food preparation and service.

The heavy level of critically ill and highly specialized patients demands a large management staff to accommodate the constant adjustments to the existing operational system. Many detailed records and supervisory checking of all work performed is needed. The Department of Food Services provides over 4,000 meals daily. Of these, approximately 1,000 are patient tray meals. Over 70 complex formulation feedings and daily nourishment supplies are provided each day.

The patient services of the Department are provided by 11 additional dietician/nutritionists, all of whom are registered and possess a minimum of an undergraduate degree in food and nutrition as well as post-graduate dietetic internship. Of these positions, 2.5 have been allocated for the provision of nutrition counselling services to out-patients. The dietician/nutritionists associated with the diabetic nephrology and gastroenterology services follow up their patients in ambulatory care services. The remainder of the positions are devoted to providing nutritional support to all of the in-patients at the Hospital. The complement of 11 dietician/nutritionists meets only the current demands for services for therapeutic diets; further requests for expanded services would require additional man hours.

Each dietician/nutritionist has an assigned group of nursing units. Each is responsible for all diet therapy and treating problems of those units which are brought to the food services' attention. Each person works one weekend in nine so that a dietician/nutritionist is on duty each day. There is a specialist available for consultation at all times from 8:30 a.m. to 5:00 p.m. Established standard infant feedings are available 24 hours a day, but there is no one to design or prepare special formulations in the middle of the night. Indeed, there is no dietician/nutritionist on duty after 5:00 p.m., as there is no requirement for service at this time which cannot be deferred until morning.

RECREATION AND VOLUNTEERS

The staff of this Department consists of a director, three supervisors, and 15 recreation therapists. The out-patient program provides recreation for out-patients in the waiting areas of the Medical Specialty Clinic, ENT, Surgery, and Emergency Day Surgery. One recreation therapist working with volunteers provides these services.

Fifteen recreation therapists in addition to volunteers are assigned to all ward areas; very often each covering two wards combined. In addition to their role as recreation therapists, they supervise volunteers and the placement of students. Recreation staff do work evenings and weekends and are available for special programs, but the bulk of their work is carried on from 9:00 a.m. to 5:00 p.m. during the Monday to Friday period. Some ward playrooms are open on the evenings and on weekends, administered by

volunteers. This depends on the nature and needs of the ward and the availability of volunteers. It also depends on the co-operation of nursing to oversee and welcome the volunteers.

The major function of evening staff from the recreation therapy group is to work with the teen program from 1:00 to 9:00 p.m. In addition, one staff member will be assigned to the teen room presently on ward 5A from 6:00 p.m. to 9:00 p.m. Monday to Friday as well as Sunday. This teen program usually runs Saturday and Sunday from 2:00 p.m. to 5:00 p.m. as well.

New facilities for the Department are being planned for 4E, which hopefully should be completed in May of 1983.

PARENTS' PERSONAL SERVICE

The Parents' Personal Service Department is open from Monday to Friday, 9:00 a.m. to 5:00 p.m. Its purpose is to assist medical and nursing staff by providing a liaison with families distant from Toronto. They assist parents with accommodation and financial concerns in order to ease their stay in Toronto during the child's hospitalization.

The specific activities can be summarized as follows:

1. To communicate with parents from out of town through informal letters and photographs during a long term hospitalization. The selection of the out-of-town families requiring this service is dependent upon a request from the doctor, head nurse or family. There are usually 15 to 20 patients who avail themselves of this service.

2. To assist parents in finding suitable accommodation during their stay. A hostel for mothers is available but space is limited to 69 rooms. A list of inexpensive tourist homes, bed and breakfast and nearby hotels is sent out on request.

3. To assist parents with financial concerns during long term or chronic hospitalization. A number of parents experience financial concerns, as the child needs to return for chemotherapy or

follow-up treatments not available to them in their particular region.

4. To provide liaison service between the Hospital and the Department of National Health and Welfare for Canadian native and Inuit families. A member of the medical services branches in Northern Ontario, Manitoba and Northwest Territories makes arrangements for parents before their arrival in Toronto.

5. To assist the Hospital and parents with discharge planning by arranging patient travel plans either home or to another facility.

MEDICAL ENGINEERING

The major focus for the Department is on the fourth floor where there are offices and laboratory areas. Situated there is the director, his secretary, a biomechanics engineer, and a technician in the pulmonary function lab. Also in the fourth floor lab is the technician who covers the Radiology, Nuclear Medicine and Ultrasound areas. The wards, clinics, home care programs, and research departments are all serviced by technicians located in those labs. There are two service and maintenance technicians, two machine shop technicians and one technician in the electronics shop.

In the second floor lab are three technicians who cover ICU, OR, EEG, Anaesthesia, Ambulatory Care and Day Surgery. One technician is in the biochemistry laboratory on the third floor. The special electro-medical equipment required for 7F and 7G Neonatology requires that one technician be housed in the 7G laboratory.

Completing the roster is an engineer housed on the first floor who is responsible for urodynamics.

The Department of Medical Engineering provides services basically from 8:30 a.m. until 4:30 p.m. with the exception of the specialized areas from the second floor lab in which the hours of coverage begin at 7:30 a.m. There is no coverage on weekends, evenings or nights.

SOCIAL WORK

The mandate of the Social Work Department is to provide psychosocial counselling to those parents and families of patients who are having difficulties in some particular area of life. It has always been both a principle and a professional expectation that staff do evening and weekend work. At present a formal on-call service for after regular hours is being considered. To date, the director and the assistant director have been on call and many of the social workers have worked this out within their own service programs. In essence, the staff hours are organized in such a way that most social workers work an evening or two each week and on weekends when needed. There is a planned flexible arrangement in order to be available to interview parents in the evenings and to be available to parents and families from out of town. The formal office hours, however, are 9:00 a.m. to 5:00 p.m. Monday to Friday.

There are 28 social work positions in the Hospital 1981-82 fiscal year. This is an increase of two from the 1981 budget of 26 positions. In the fall of 1982 a new director was appointed. The two additional positions are listed as supervisory and are concomitant with the appointment of the new director. These individuals supervise on a half-time basis and provide direct counselling service in the other half time of their position.

Additional service through one of the supervisory positions is provided to the Gastroenterology service half time and from the other position a half-time commitment to Cardiology.

Full time social workers are assigned in the following areas:

Adolescent Medical Out-Patient Clinic
Adolescent Psychiatry, In-Patient Ward (2 positions)
Child Abuse and Sexual Abuse (In and Out-Patient - 2 positions)
Cystic Fibrosis Service (In and Out-Patient 1.5 positions)
Facial Treatment and Research Centre and Plastic Surgery
General Medical Out-Patient Clinic
Neonatology Service (In and Out-Patient - 2 positions)
Nephrology Service (1.5 positions)
Neurology Service (In and Out-Patient)
Oncology/Haematology (2 positions)

Psychiatry Out-Patient Clinic (3 full-time and 2 half-time positions)
Otolaryngology Service

In addition to this coverage, half-time social workers are assigned to the Child Development Clinic Out-Patient area and the long term hospitalization program. Three hours per week are assigned to the Burn Unit and to the Cardiology Service, both of these on an in-patient and out-patient basis.

There is, in addition, a general referral program in which three social workers cover referrals from any other medical specialty services not covered otherwise, for example, Gastroenterology, Emergency, Orthopaedics, Cardiology, Paediatric Referral Clinic, ICU, Wards 4C and 4D. Two social workers work in social work administration as director and assistant director.

A priority plan was presented to the Executive Director of the Hospital in the summer of 1981 outlining additional staffing needs. Included in this presentation was a request for additional staffing in the following areas: ICU, Cardiology, Gastroenterology, Burn Unit, Wards 4C and 4D. The needs were identified as requiring three full-time social workers and two half-time workers. These requests were not granted, due to a budget hold on new positions.

It should be noted that in all but one of the 28 social work positions, the incumbent possesses a Master of Social Work Degree. It is suggested that these qualifications be a requirement in order to ensure that the social workers are trained sufficiently to deal with the emotional and behavioural difficulties presented to them in the referrals. Individuals with lesser qualifications, such as those employed in other hospitals of an acute care nature, are not deemed to possess the knowledge and skill required in this facility.

It has been suggested by nursing personnel that Social Work is an important department, providing an efficient and comprehensive service. However, they regret that so few people are available on evenings and weekends, and it seems reasonable to suggest that the on-call service presently being considered be implemented in order to improve the overall contribution of the Department.

Chapter X

The Division of Cardiology

Part I

INTRODUCTION

Cardiology is a division of the Department of Paediatrics (that is, the medical as opposed to the surgical service of the Hospital) and is responsible to the Chairman of the Department of Paediatrics and to the Hospital Administration for the provision of diagnostic and medical therapeutic services for the entire cardiac patient population of the Hospital for Sick Children.

The cardiovascular surgery is performed by cardiovascular surgeons who, for administrative purposes, are within a division of the Department of Surgery. They are in turn supported by the cardiovascular surgical fellows and residents.

In recent years the cardiologists, in association with the cardiovascular surgeons, the Intensive Care Unit and the nursing staff, have made great strides in the treatment of children with complex heart ailments.

With few exceptions, the patients admitted to the Hospital with cardiac ailments have very complex heart malfunctions and are gravely ill. For the most part they are particularly high-risk patients. Many of them are under one year of age and some only a few days old, which adds to the risk. It was not many years ago that it was felt that little could be done by way of treatment for such patients, but heroic efforts are now being made to save the lives of children who would not have had such an opportunity in the past.

The services provided by the cardiologists, the cardiovascular surgeons, the Intensive Care Unit and the nursing staff at this Hospital are available in only a few hospitals in Canada. Children with serious cardiac ailments are sent to this Hospital from many other hospitals in Canada and the United States where such services cannot be provided. In order to endeavour to save the lives of these children, surgical procedures are performed which carry inherent risks, particularly in the case of small babies. Even in cases of some immediate progress in their treatment, many of these patients still have a very short life expectancy.

Some 8,000 patients are seen by the service every year in consultation, of which number 60% come from outside Metropolitan Toronto. Approximately, 6,000 patients are examined in the cardiac clinic area as out-patients and 2,000 patients are admitted to the Hospital annually for detailed investigation or treatment. On any one day during the week, patients are distributed throughout the wards of the Hospital in the following approximate numbers:

Cardiac Ward (4A/B)	- 40 patients
Intensive Care Unit	- 5 patients
Newborn Service (7G)	- 20 patients
Other Hospital Wards	- 15-20 patients
Cardiac Clinic	- 30 patients

The first stage of consultation by the medical staff is the direct or indirect review of the history from the parents of the child, the physical examination and examination of the x-ray film of the chest. A large variety of additional investigative procedures are handled from that point on by the Division of Cardiology and its technical services. The interpretation of all these steps is the responsibility of the cardiologist and his staff. During 1980 the following were the numbers of procedures of this type performed:

Standard electrocardiograms	13,317
Treadmill exercise electrocardiograms	738
Vectorcardiograms	173
Echocardiograms	4,873
Cardiac catheterizations	695
Holter Monitoring ECG 24-Hour	313
Telephone pacemaker assessments	141

The medical staffing for these services is supplied by seven full-time hospital-based staff cardiologists. All are certified by the Royal College of Physicians and Surgeons as subspecialists and all hold appointments in the Department of Paediatrics at the University of Toronto. Six of the seven are now full professors. In order to provide a greater efficiency of operation for this very large patient load with its increasing technical requirement for accessory investigation, the Division has been sectionalized into areas of specific responsibility for the administration of the clinical service, one for pathology, one for the Heart Station, one for the catheterization laboratories, etc. Staff assignments are made on a rotational basis in all these areas. This means that staff and trainees will rotate through different patient care areas for certain periods of time ranging from one to two days per week in the cardiac catheterization laboratory and the out-patient clinic, one month to six-week rotations on the Cardiac Ward or the 7G Newborn Service, up to as long as the entire year on certain specified wards within the Hospital where a smaller number of consultations might exist. Coverage for these services is 24 hours a day all year round by the Cardiology Division with rotation of night and weekend duties in addition to those other rotations. Continuity is achieved by daily ward conferences and late afternoon conferences where the responsibility is handed from one group to another.

Part II

CARDIAC WARDS 4A/B

On March 31, 1980, the cardiology services moved from what was previously ward 5A to newly renovated wards 4A and 4B. This unit is a 43-bed combined medical and surgical ward with the patients divided about equally between medicine and surgery. This represented an increase of approximately four beds from that which was previously provided. The wards contain patients who are being treated because of critically severe heart problems, patients who have the need of post-operative care following return from the Intensive Care Unit prior to discharge, patients who are being diagnosed,

particularly those undergoing cardiac catheterization and angiocardiography, and patients waiting surgery.

The wards during 1980/81 were staffed by one cardiologist who acted as the ward chief. He was assisted in the management of patients by one paediatric cardiology fellow and three general paediatric residents. This group of physicians managed the admissions, investigation and treatment of the cardiac patients for approximately one month during the working hours of 8:30 a.m. to 6:00 p.m. Rosters of a staff cardiologist, a cardiac fellow and a paediatric resident, who will be on duty for night and weekend call, are published and the handover of responsibility is achieved through rounds at 4:00 p.m. in the afternoon and 8:30 a.m. each morning five days a week. Weekend cover is handled in a similar fashion by the staff cardiologist, cardiac fellow and resident.

The resident on duty at night and on weekends is present on the ward throughout the shift, and a cardiac fellow and a staff cardiologist are on call. There is also in attendance at night and on weekends a cardiovascular resident who is supported by a cardiovascular fellow and a cardiovascular surgeon on call.

There are work conferences five days a week in which new emergencies or critically ill admissions are discussed. The deaths which have occurred overnight or over the weekend are assessed, and there is a review of the accessory investigations conducted the previous day. Formal ward rounds are conducted three times a week, one of these being with the Surgical Group, but the staff cardiologist sees all new admissions and any problems that occur on the ward every day and often two or three times a day depending upon the need. Nursing personnel participate in the major rounds and where necessary in other rounds.

Residents on the Cardiac Ward obtain the history, conduct a physical examination and write the orders after consultations with the cardiac fellow and/or the staff cardiologist. The written orders are effected by nursing personnel. Since September 1980 a clinical pharmacologist has been assigned to the Hospital's 4th floor wards (4A/B, 4C/D) and has overseen the appropriateness of drug orders.

The staff cardiologist, being the ward chief, is responsible for supervising patient care, reviewing medications (indications and dosage) and providing ongoing communication with parents, as well as teaching resident staff and fellows for the month he is on the service. The cardiac surgeon to whom a particular patient is assigned is the individual responsible for that patient. He is assisted in this role by the cardiovascular surgical resident staff. The cardiologist acts as cardiac consultant to the surgical patients transferred to the Operating Room and/or the Intensive Care Unit who later return to the Cardiac Ward from those areas.

Staff cardiologists who are not the ward chief for the month are not directly involved in ward activities, even when a patient whom they have referred for admission is on the ward, except when they assume that role temporarily during a night or weekend coverage or in the catheterization team which previews the patients who are to undergo that type of assessment. They frequently will be indirectly involved in the management of patients on that ward through the daily work conferences, when they are consulted by the ward chief about their or a particular patient on that ward or when they are the attending cardiologist in the catheterization laboratory for their particular service day of the week.

This information is conveyed to parents by the cardiologist prior to the time of admission in the case of elective admissions seen previously in the Cardiac Clinic. In all cases, a special booklet is distributed to parents which explains the above set-up.

The total ward staffing organization, including that of the nursing groups, is displayed in a large letter board at the ward desk.

Staff cardiologists are on call approximately one night in seven, the fellow is on call one night in five and the residents are on call one night in three or four.

In the event of cardiorespiratory arrest, there is an established procedure for nursing and medical personnel to institute cardiopulmonary resuscitation. A special team is responsible. The Cardiology Service may be called in consultation and are usually involved, but they do not have a primary responsibility for resuscitation.

Part III

WARDS 4A/B: JULY 1980 - MARCH 1981

During the day one of the seven staff physicians in Cardiology was assigned monthly as ward chief for wards 4A/B on a rotating basis. He was assisted by one cardiology fellow (specialty resident) and three general paediatric residents. In the night-time, however, only one paediatric resident was assigned to cover both of these wards, with a cardiac fellow and a staff cardiologist on call. A cardiovascular surgical resident also made rounds each morning and made evening rounds in the cardiac ward and the Intensive Care Unit. A cardiovascular surgical resident was also on call at night.

Each of the two wards during this period had a head nurse, and in each of the wards the normal nursing complement was composed of a team leader, two registered nurses, and a registered nursing assistant. The head nurse worked the day shift only, but otherwise the nursing complement was the same at night as it was in the day. The nurses worked a 12-hour shift, from 7:30 a.m. to 7:30 p.m., and from 7:30 p.m. to 7:30 a.m.

Mortalities

Following the move of the cardiology services to wards 4A/B, there were no significant changes in the number of mortalities for the first few months. However, in the summer of 1980, concern was expressed by the nursing staff as to what appeared to them to be an increased number of deaths, particularly in the cardiac ward 4A. It was not merely the increase in numbers, but it appeared to the nurses that some patients were dying at a moment in time when they were not expected to do so and, most significantly, none of them could be resuscitated.

Some of the patients had been operated upon, had proceeded from the Intensive Care Unit into the wards and appeared, at least for the time being, to be somewhat stabilized. Others were being prepared for an operation, and their condition was such that it was expected that they would be well enough to be operated upon. Others were brought into the

wards seriously ill for diagnostic treatment. All of them appeared to suffer from unexpected cardiac arrest and died.

In July, August and September of 1980, there were at least five deaths in each of those months which could be described as deaths in the cardiac wards. This is to be compared with the total of six ward deaths in the previous six months, some of which had occurred in ward 5A prior to the move.

The patients who were the subject matter of the nurses' concern were principally those who were dying at night in ward 4A while under the care of one nursing team. Since the mix of patients was approximately the same in each of the wards, the nurses in ward 4B were somewhat at a loss to understand what was happening in the other ward and why the children were dying there. They were fearful that similar problems might arise in their ward in the future.

The nurses' concern was brought informally to the attention of the cardiologists, and there was understandably great strain on the nursing complement in both wards. Although all these patients were seriously ill and death in the future not completely unexpected, their deaths were not expected at that time. The nurses were assured by the medical staff that they had done all that they could to save their patients.

The cardiologists also became concerned about the increased number of deaths in the wards. On September 5, 1980, a meeting was convened of three staff cardiologists, seven nurses, and four fellows. Three cases of patients who had died in July and August were reviewed in detail. The charts of these patients in each case disclosed serious heart ailments which could have eventually resulted in death, but there was no ready explanation for the sudden cardiac arrest and the failure of resuscitation efforts. It was felt, however, that closer monitoring and ventilatory support might have averted the cardiac arrests in some of these cases, and that the establishment of an Intermediate Care Unit in the future, where closer monitoring could be effected, might prove to be of some assistance.

On September 26, 1980, a further conference was held with staff cardiologists, fellows, and nine nurses. Three additional cases of patients who died in August were carefully analysed. Again, although these patients

were also suffering from severe heart malfunctions, the reason for their sudden cardiac arrest was not discovered. The procedures in cardiac resuscitation were examined, and it was felt that a review of the dosage schedule of drugs to be used in the case of cardiac arrest should be undertaken in order to prevent the possibility of errors in the dosage and administration of drugs at the time of such arrest.

When the Cardiology staff reviewed the deaths, they found it difficult to be certain whether the apparent increase was really an unexpected increase, or whether it was due to the fluctuation in the number of patients with serious heart disease. There are well-known epidemiologic and demographic factors which influence numbers of this sort and, in the view of the cardiologists, made interpretation extremely difficult. The staff decided, however, that it would be in the best interests of the patients to assume that the increase might be real and to take appropriate action.

Further reviews were conducted in the fall of 1980. The number of deaths decreased in October and November, but increased again in December. At that time the cardiovascular surgeons also expressed concern about the number of post-operative patients who had died in the wards shortly after being placed there from the Intensive Care Unit.

In January 1981, a broader cardiac surgical mortality review was convened. In addition to cardiologists and nurses, cardiovascular surgeons and intensivists also attended. A review of the medical charts of 22 patients who had died in the cardiac wards between July and December 1980, was conducted.

Of the 22 cases reviewed, it was felt that two of these deaths were expected and resulted from cardiomyopathy and from pulmonary vascular disease. The concentration was on the 20 other deaths of patients who had died between the ages of nine days and 12 months. Nine of the 20 were neonates. Approximately one quarter of these infant deaths were to be expected. In these patients there was extremely severe cardiac disease, where either an operation was not possible or the abnormal anatomical features of a theoretically operable patient rendered survival unlikely whatever steps might have been taken. Of the remaining 15 patients, although all of high risk, there was no ready explanation for death occurring on the ward at that time. Five of the 15 died before reaching

the operating room. It was felt that four of those five may have benefited from ventilatory support. All were candidates for surgery and delay in reaching surgery may also have been a factor. Ten of the 15 died after they had had surgery and had passed through the Intensive Care Unit. One of these deaths was associated with a medication reaction. Five represented examples where an earlier intervention with re-operation may have been helpful, and four others may have been assisted by more intensive monitoring and care than was available in the ward.

The review was limited to an examination of the medical charts and an analysis of the surgical, cardiology and nursing practices. It was assumed that the charts actually reflected the care given, and toxicology was not brought into consideration. As has been noted, almost all the deaths which were under review occurred at night while the patients were under the care of one team of nurses. The Mortality Review Committee did not address itself to this factor.

Because of the strain which was placed on the nurses in the cardiac ward, and particularly on the one team, some consideration was given by the head nurse and clinician nurses to breaking up that team. It was the view of the head nurse, however, that such a change would not be appropriate.

Most deaths due to heart conditions in childhood occur because of congenital heart malformations. A smaller number are due to acquired valvular diseases of the heart, muscle disease or diseases of the conducting system of the heart. The number with rheumatic heart disease is extremely small. In nearly all studies examining age at death amongst infants with congenital heart disease, there is a heavy mortality in the first year of life. In Keith, Rowe and Vlad, Heart Disease in Infancy and Childhood, 3rd Edition, 1978, page 8, it is noted that amongst 2,870 infants and children who died with congenital heart disease, nearly 40% died during the first month of life, 36% between one month and 12 months of age, and 15% between one and five years of age. Only 14% died after the age of five years. This highlights the fact that the peak mortality is in infancy, the time when most serious conditions and major haemodynamic disturbances are therefore found. To some extent these figures are being changed by improved medical and surgical techniques.

There is also a variation of a cyclical nature in respect of the type of heart malformation presented throughout the year or years. A clustering of malformations can occur. Often several patients are seen with hypoplastic left heart or transposition of the great arteries in one month or another and then very few such patients for several months, and this would influence the annual mortality figures.

It was felt that another factor in the number of ward deaths might have been related to the number of infant beds available on the ward. The expansion by several infant beds on the cardiac ward from the previous number on ward 5A could influence the statistics because death more commonly occurs in the infant patient.

Another factor considered was the increased number of referrals to the surgical unit from western Canada in the period under review, which some considered may have been a factor in the analysis of those deaths which had occurred.

It was also noted that the number of operations had increased steadily over the past several years and that the development of new surgical procedures carries a higher risk at the period of their introduction.

Although there was no clear indication that changes in practices and procedures would have saved any of the lives of the children under consideration, the Mortality Review Committee convened in January concluded that steps should be taken to improve those practices and procedures in the future. Again, it was felt that an improved capability for monitoring the heart rate and respiration of small, ill babies might be helpful, and the most effective way that this need might be covered would be through an Intermediate Care Unit.

It was again noted that, at the time of the cardiac arrest during resuscitation efforts, there is a high potential for error in the administration of drugs. It was felt that a detailed dosage schedule provided on the arrest cart setting forth the recommendations for dosage administration at such times would be helpful to those working on the arrest team and might prevent errors.

Further operating time for the cardiovascular surgeons was also indicated.

It was the view of Nursing, supported by the Director of Cardiology, that there was also a need for increasing the subspecialty residency support for the cardiac ward, particularly at night.

A sub-committee was struck to prepare a presentation for the Program Advisory Committee with a view to bringing about the changes recommended by the Mortality Review Committee. This required in part an analysis of needed new equipment, increased nursing staff and increased nursing training, and the allocation of space. The Report was completed on or about March 12, 1981, and put before the Program Advisory Committee of the Hospital on April 15, 1981, with an addendum, dated April 23, 1981, recommending increasing sub-specialty residency support.

It is to be noted that the reviews conducted in the fall of 1980 were limited to a review by cardiologists and cardiology nurses only. The review in January included cardiovascular surgeons and intensivists, but again it was confined to those who had the direct responsibility for the care of the cardiac patients. There was no inter-disciplinary representation. The Mortality Review Committee did not include a pathologist, a representative from the Department of General Surgery, a general paediatrician, a clinical pharmacologist, nor an epidemiologist.

It was not until after the January meeting that disclosure was made to Administration that there were problems in wards 4A/B. A copy of the minutes of the January meeting was forwarded to the acting Administrator, who was then advised informally that a problem existed. As a result of this informal meeting, he concluded that the matter was in hand, and the report of the problem was not carried forward to the Board of Trustees at that time.

It is also to be noted that the results of the reviews conducted were not passed on to the Medical Advisory Committee, to the Risk Management Committee, nor to any other of the many committees which might have been expected to receive the report.

In January 1981, there was only one death in the cardiac wards, but in February there were five, and in March eleven. All told, there were 45 deaths which could properly be described as ward deaths between July 1980

and March 22, 1981. This far exceeded the number of deaths in any previous nine-month period.

On March 25, 1981, a paediatric nurse was charged with the murder of three of the patients who had died in March 1981: Kevin Pacsai, Allana Miller, and Justin Cook; and the murder of Janice Estrella, who died in January 1981. It is these deaths which formed the focal point of the intensive police investigation and of the study by the Center for Disease Control to which reference has been made.

The Digoxin Factor

There has been little documented history of infant cardiac patients dying as a result of an overdose of digoxin, which is a drug in constant use in the treatment of patients with cardiac ailments. The therapeutic dosage of digoxin administered at the Hospital is calculated on a very conservative basis.

Although digoxin levels are taken on all patients for whom digoxin has been prescribed, post-mortem digoxin levels were not taken routinely on all Hospital deaths. In the Mortality Review conducted, as has been noted, toxicity was not considered as a potential cause of any of the deaths, nor was consideration given to potential foul play. It was not until March 1981 that an overdose of digoxin, intentional or accidental, was first considered as a potential cause of death of some of the patients who had died in the wards between July 1980 and March 1981.

Kevin Pacsai died on March 11, 1981. His death was reported to the coroner, and the initial examination did not disclose any reason for further investigation. A post-mortem digoxin test was made from samples of blood and body tissue taken from Kevin Pacsai. The blood was analysed at the biochemistry laboratory at the Hospital, and the analysis disclosed a digoxin level in the blood of 26 nanograms per millilitre of blood. A sample of the blood and specimen was sent to the Centre for Forensic Science, and the analysis conducted there confirmed this level in the blood of Kevin Pacsai at the time of his death. This was considerably higher than what was regarded as a normal range which might have been expected if only the therapeutic amount of digoxin which had been prescribed had, in fact, been administered.

The results of the post-mortem laboratory tests relating to Kevin Pacsai were received approximately on March 18, 1981, and the coroner was immediately advised and commenced his investigation into this death.

When the results of that digoxin level became known, an incident relating to the death of Janice Estrella, who died on January 11, 1981, was recalled. Following the death of this patient, the staff cardiologist asked the resident in pathology to take a sample of blood in the course of the autopsy. The resident initially forgot to do so and went back to the morgue to obtain the sample. The analysis showed a reading of 72 nanograms per millilitre. When that analysis was reported, it was viewed as so astonishing that it was attributed either to an error in calculation, a laboratory error or the result of a contaminated sample. Since the report did disclose that the specimen was taken from contaminated material, it was suggested that a further test be conducted. This was not done and was not followed up. No significance was attached to it at that time.

The digoxin factor only became a critical matter for investigation after the death of Kevin Pacsai. At that time, it became known to those working in the cardiac ward that Kevin Pacsai was found to have had a very high post-mortem level of digoxin in his system, and that there would likely be a coroner's investigation in connection with his death.

In the early morning hours of March 21, 1981, a patient Allana Miller died in the ward. An autopsy sample taken shortly after her death disclosed a level of 78 nanograms per millilitre, again a level much higher than was to be expected if the patient had only been given the normal therapeutic dose. The coroner was advised of this death and of the post-mortem digoxin level. The police were also notified and joined the coroner in commencing an investigation.

On Saturday, March 21, at approximately 10:30 in the evening, the following instructions were issued by the Chief of Paediatrics:

1. All digitalis will become a control drug immediately and treated as a narcotic. All digitalis preparations in the Hospital will be locked in the narcotics cabinet.

2. All digitalis will be dispensed by either team leaders or charge nurse with the usual check by a second nurse and with this check being confirmed in writing and signed.

3. Drs. Costigan and Mounstephen will do a check of all crash-carts for parenteral digitalis preparations.

4. In the morning, all digitalis inventory will be done in the Hospital and all digitalis will be returned to the Pharmacy. New digitalis will then be dispensed from the Pharmacy to the locked cabinets.

5. All crash-carts will be checked daily for the parenteral digitalis.

A further request was made for the heart preparation of those children who died in wards 4A/B to be examined for digitalis levels.

In the early morning of March 22, Justin Cook, also a patient in the cardiac ward, died. Unlike the cases of Estrella, Pacsai and Miller, baby Cook had not been prescribed digoxin at the Hospital for Sick Children. He had arrived from Owen Sound, by transport, about 10:30 in the evening of March 20. In his case, digoxin was contra-indicated. After his death a sample of blood was taken, and upon analysis it was revealed that the digoxin blood level was in excess of 90 nanograms per millilitre.

His death was also immediately reported to the coroner and to the police, as were the results of the laboratory tests.

On March 22, the following direction was given:

> A nursing supervisor will be assigned to Ward 4A and another to Ward 4B. These supervisors will check the giving of all medication on the ward from the point of calculation of the material in accordance with the doctor's orders, through the drawing up of the drugs, and actual giving of the medication to the patients.
>
> The nursing team on Ward 4A/B has been relieved of duty with pay in consultation with the Police and the Hospital Administration.
>
> All elective admissions have been stopped on Ward 4A/B.
>
> The decision to take daily digitalis levels of all patients on Ward 4A/B will be continued until further notice.
>
> . . . the decision has been made to remove all parenteral digitalis from crash-carts through the Hospital. Parenteral digitalis will be kept locked up and treated as a control drug as is oral digitalis. Miss Peggy Rappaport from the Pharmacy has carried this out.

On Sunday, March 22, 1981, following a preliminary investigation by the police, the evening nursing team on ward 4A was relieved of duty and advised not to report for duty on Sunday evening. It was one of this team who was arrested on March 25. The other members of the team continued on paid leave of absence until Sunday, March 29.

Because prior to March 1981 no infant had been known to have died as a result of digoxin poisoning, there was no perceived reason to have post-mortem digoxin level tests routinely performed. The procedures for doing so and the validity and significance of the values taken are still under review. This is particularly so with respect to preserved tissue samples and post-mortem tissue. Since March 1981, post-mortem digoxin blood samples are taken as a matter of routine in every autopsy at the Hospital.

Reports to the Coroner

According to the records provided to the Committee from the Office of the Chief Coroner of Ontario, reports to the coroner were promptly received in the case of 14 deaths which had occurred in the cardiac wards between July 1980 and March 1981. Three of these related to the deaths of Kevin Pacsai, Allana Miller and Justin Cook. The Hospital's records indicate that additional cases were reported to the coroner, but these were impossible of verification.

Of the 15 deaths with respect to which concern was expressed in the Mortality Review in January 1981, only eight deaths appear to have been reported promptly to the coroner. It was not until receipt of the report of the post-mortem digoxin levels with respect to Kevin Pacsai that the coroner's office determined that a further investigation was warranted. Subsequently, according to the records of the coroner's office, a further 21 deaths of patients who had died in the cardiac wards between July 1980 and March 1981 were reported to the coroner. Included in this group was the reporting to the coroner on March 20, 1981, of the death of Janice Estrella who died on January 11, 1981. This followed receipt of the report of the digoxin levels relating to Kevin Pacsai, which recalled the earlier digoxin blood level taken on Janice Estrella which at the time had been viewed as being inaccurate.

Since March of 1981, the Hospital has constantly kept in touch with the coroner's office with respect to deaths and digoxin levels, and often in circumstances which would not normally warrant a report to a coroner.

Part IV

MARCH 25, 1981 - OCTOBER 1982

As has been previously observed, one of the first tasks that the Review Committee undertook was to carefully examine the medical charts of all patients with cardiac ailments who died in the cardiac wards between March 25, 1981, and August 1982.

The number of deaths of patients with cardiac ailments who died in the cardiac wards has dropped dramatically since March 1981. These numbers are consistent with the history at the Hospital prior to July 1980.

The Committee also examined in detail the medical charts of all patients with cardiac ailments who died in that period of time other than in the wards. These deaths occurred in the Operating Room, in the Intensive Care Unit, and in the Neonatal Intensive Care Unit.

In addition, the Committee continued to monitor the number of deaths of patients with cardiac ailments and the post-mortem digoxin levels.

The following analysis prepared by the Department of Pathology reflects the total number of cardiac autopsies of all patients with cardiac ailments between the year 1975 and October 1982, setting forth the place of death of such patients.

It is to be noted that these schedules represent only those deaths with respect to which an autopsy was performed. The practice at the Hospital is to seek authority for an autopsy with respect to every death. Overall, autopsies have been conducted in approximately 60%-70% of all deaths in the

Hospital. Thus, although the statistics do not represent all deaths of cardiac patients, the charts represent a valid basis of comparison. They also afford the most accurate basis for the determination of the place of death in the Hospital.

	4AB/5A	7E/G	ICU	OR	OTHER	TOTAL
1975						
JAN	2	3	1	2		8
FEB		3	3	1		7
MAR	2		3			5
APR		2	5	2		9
MAY	1	3	5		1	10
JUN	1	3		1	1	6
JUL	3	1	2	1		7
AUG			2			2
SEP	1	1	1	2		5
OCT	1	9	1	2		13
NOV		3		1		4
DEC	1	2	2	2		7
	12	30	25	14	2	83
1976						
JAN	1	5	1			7
FEB	1	2	1			4
MAR	1	3	1	2		7
APR		4	4			8
MAY		2	6	1		9
JUN	1	3	4	1	1	10
JUL		3	1	1		5
AUG	3	2	2			7
SEP		2	4	1		7
OCT		3	2	2		7
NOV		3	5	1		9
DEC			5	1	1	7
	7	32	36	10	2	87
1977						
JAN	2	4	2	2		10
FEB	2	1	1			4
MAR		3	1	1		5
APR	1	1	3	2	1	8
MAY		4	2			6
JUN	1	2	2		1	6
JUL		1	1	1		3
AUG	1	2	2	1	1	7
SEP			2	3		5
OCT	1	1	2	1		5
NOV		2	4			6
DEC		1	4			5
	8	22	26	11	3	70

	4AB/5A	7F/G	ICU	OR	OTHER	TOTAL
1978						
JAN	1	4	1			6
FEB	1	1	2	1		5
MAR	1	1	3	2		7
APR		2	2	1	1	6
MAY		2		2		4
JUN	1	2	4			7
JUL		2	1	1		4
AUG	1	2	4	1		8
SEP		3	1	2	1	7
OCT		3	3	2		8
NOV	2	1	5			8
DEC		3	1	4		8
	7	26	27	16	2	78
1979						
JAN	1	2	1	3		7
FEB	2	3	1			6
MAR		1	4	2		7
APR	1	2	4	1		8
MAY		2	3			5
JUN			2	1		3
JUL		2	3			5
AUG	1	1	2			4
SEP		1	2	1		4
OCT		2	2			4
NOV	2	2				4
DEC		2	1	1		4
	7	20	25	9	0	61
1980						
JAN	1	1	1			3
FEB		3	3	1		7
MAR		3	1	1		5
APR	1	5		1		7
MAY		2		2		4
JUN	1	4	1	2		8
JUL	4	1	3		1	9
AUG	4	1	4	1		10
SEP	1	1	1	3		6
OCT	2	1	6			9
NOV	1	1	5			7
DEC	4	3	1			8
	19	26	26	11	1	83

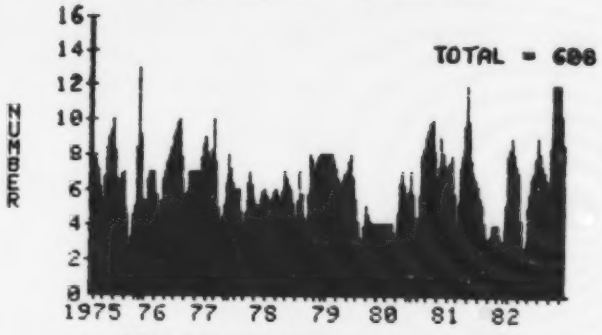
	4AB/5A	7F/G	ICU	OR	OTHER	TOTAL
1981						
JAN	1	1		1		3
FEB	2	2	2	2		8
MAR	6	4	1	1		12
APR		3	2	1	1 C.lab	7
MAY		2	2	2		6
JUN		2	3			5
JUL			3			3
AUG		3	1			4
SEP		1	2	1		4
OCT		1	1		1 4C	3
NOV		5	2	1		8
DEC		3	3	3		9
	9	27	22	12	2	72
1982						
JAN	2	2	2	1		7
FEB				1		1
MAR		1	3		1 7C	5
APR	1		3	1	2 C.lab Emerg	7
MAY		2	3	2	2 Emerg	9
JUN		2	2	2	1 7A	7
JUL	1	1	4			6
AUG	2	5	5			12
SEP		4	7		1 Emerg	12
OCT		1	5	1	1 Emerg	8
NOV						
DEC						
	6	18	34	8	8	74
TOTALS:						
1975-1982	75	200	221	91	21	608

The following note from the Chief of Pathology is helpful in analysing the information set forth above:

> This listing was created for one purpose, that being to collate the recorded autopsy information in such a way as to permit its interpretation. This data was derived from two sources. The vast majority of it was obtained from the autopsy records in the Department of Pathology at the Hospital. A small amount of information came from the annual printout of information from Medical Records' information which is stored in the Hospital's computer system.
>
> I arbitrarily chose January 1975 as the starting date of this information. This date was chosen for several reasons, among them being the fact that Medical Records information was available from that date onwards, and that this time period represents a full 5 years before the opening of the Cardiac Ward on 4AB in the summer of 1980.
>
> THE DATA BASE
>
> . . . . .
>
> It must be recognized that many of these patients had diseases other than their congenital or acquired heart disease. Several died of heart disease complicating a congenital diaphragmatic hernia, many had multiple congenital anomalies of which abnormal cardiac anatomy was only one of their problems; others had chromosomal abnormalities such as Down's syndrome (Trisomy 21) or Trisomy 18 along with their cardiac defects.
>
> The data was input into a microcomputer (Apple][) and analyzed using a commercially available database program (The Data Factory, Micro Lab, Highland Park, Illinois). While I have attempted to remove typographical errors, they no doubt must exist in this listing, which contains somewhere between 6000 and 8000 pieces of information.

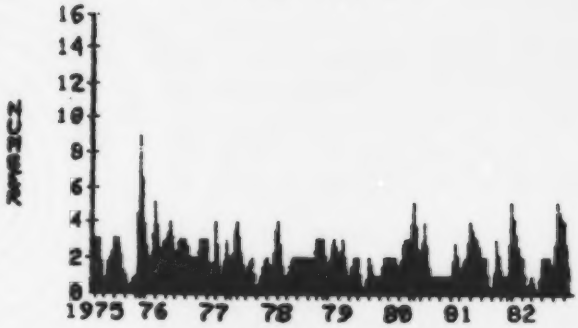
In diagrammatical form the analysis made by the Chief of Pathology is set out hereunder:

TOTAL CARDIAC AUTOPSIES



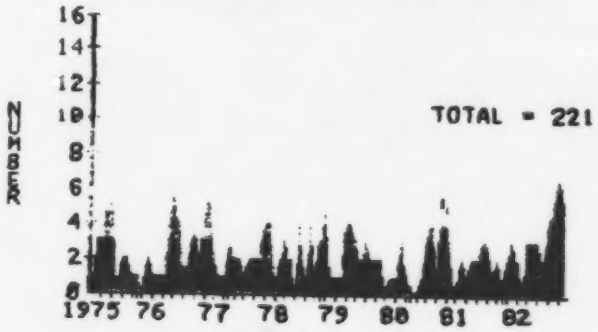
CARDIAC AUTOPSIES BY MONTH
1975 - 1988

WARD 7F-7G



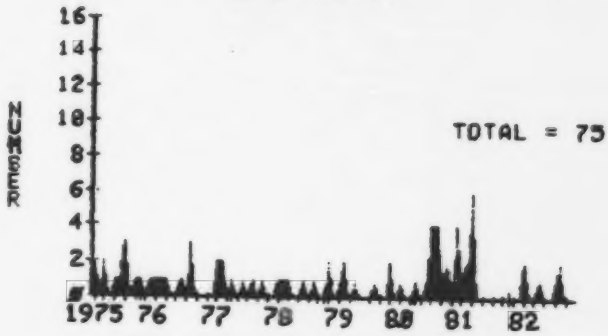
7F-7G CARDIAC AUTOPSIES
1975 - 1982

INTENSIVE CARE UNIT



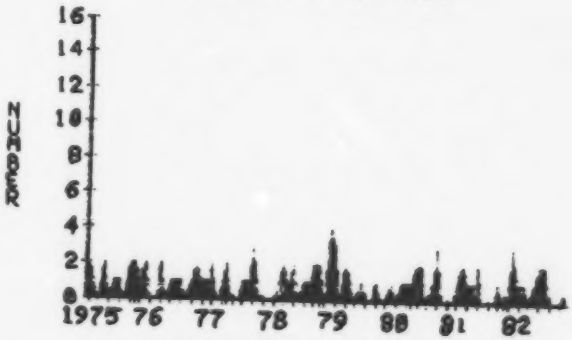
ICU CARDIAC AUTOPSIES
1975 - 1982

WARD 4AB/5A



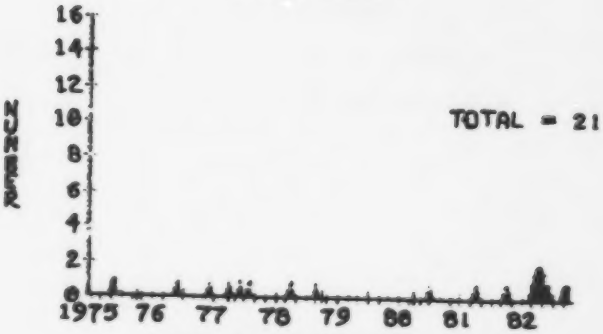
4AB / 5A CARDIAC AUTOPSIES
1975 - 1982

OPERATING THEATRES



O.R. CARDIAC AUTOPSIES
1975 - 1982

OTHER WARDS



CARDIAC AUTOPSIES FROM
OTHER WARDS
1975 - 1982

The following note from the Chief of Pathology is explanatory of the graphs:

> The foregoing six graphs represent the number of children who had significant heart disease at autopsy, broken into each monthly period beginning in January 1975 until October 1982. The graph for the total number of cardiac autopsies is broken into its constituent ward components (i.e. 4AB/5A, 7F/G, ICU, OR, and Other).
>
> Prior to the Summer of 1980, most of the cardiac patients who were beyond the newborn period were admitted to Ward 5A. After the completion of 4AB, the children with heart disease were admitted to these renovated facilities. For the purpose of this study, wards 5A and 4AB are combined. I did not distinguish between a child admitted to ward 4A and ward 4B, as this information was not readily available.
>
> While 7G is the newborn intensive care unit, ward 7F also handles some of these patients, and therefore the data from these two wards was combined.
>
> The Intensive Care Unit handles virtually all of the post-operative patients, and therefore can be expected to have a high death rate. In the Medical Records information, many patients who died during operative procedures are recorded as having died in the ICU, and therefore this figure may be artifactually elevated.

Since March 24, 1981, the Hospital has carefully monitored the digoxin levels of patients while being treated with digoxin, and all post-mortems since that date have included post-mortem digoxin level tests.

Set out hereunder is an analysis prepared by the Chief of Pathology of all the post-mortem digoxin tests taken between March 24, 1981, and November 15, 1982, which includes the results of those tests relating to patients with cardiac ailments:

ANALYSIS OF POSTMORTEM DIGOXINS

March 24, 1981 - November 15, 1982

Total number of postmortem examinations		575
Total number of postmortem digoxins		416
<1.0 ng/ml	325*	
1.0 - 4.9	67**	
>5.0	24***	
	416	

* postmortem digoxin values <1.0 ng/ml are considered unreliable technically.

** 60 of the 67 were on digoxin. In the other 7 cases the values were in the 1.0 - 4.9 range, there was no record of digoxin administration in the patients medical chart; they were reported to the coroner - all the patients were desperately ill recent transfers to H.S.C. (In the 7 cases death occurred 3 days, 2 days, 1 1/2 days, 1 1/2 days, 5 1/2 hours, 2 hours and DOA, respectively, after arrival in the hospital. The child that died at 5 1/2 hours had a cardiac arrest before reaching the hospital; the one that died at 2 hours of arrival had a cardiac arrest on arrival in the emergency room, the DOA died at home.

*** Those >5 were also reported to the coroner and, after review, were considered normal for therapeutic post-mortem values. All were on digoxin. Some of these were not blood but blood-stained fluid.

COMMENT ON THE CARDIOLOGY DIVISION

New Procedures

It is also to be observed that changes in the procedures in the cardiac wards and the CPR unit have been brought into place since March 1981. A detailed dosage schedule is provided on the arrest cart for resuscitation to reduce the possibility of error in the administration of drugs at the time of cardiac arrest and during resuscitation efforts.

There is a continuing problem over the matter of re-intervention in sick infants who have had surgical treatment to increase pulmonary blood flow. Those infants are now monitored on the cardiac ward with transcutaneous measurements of oxygen tension and, if the situation warrants it, these individuals are subjected to further angiographic investigation to define the dimensions of the shunt. The surgical technique of performing the shunt has changed, and the preliminary results suggest that the problem as a whole has been reduced.

There has also been some increase in the operating room time allotted to the Cardiovascular Surgical Division, and arrangements are now being made for an additional cardiovascular surgeon to join the present team.

An additional general paediatric resident has been added to the previous complement of three, making four general paediatric residents attached to the two wards.

An additional cardiac fellow (specialty resident) is attached to the wards; there is now one cardiac fellow on each of 4A and 4B. An additional staff cardiologist has been assigned to the floor; there is now one cardiologist for each of 4A and 4B. Thus, for each of the two cardiac wards, 4A and 4B, there are now two general paediatric residents, one cardiac fellow and one staff cardiologist.

The cardiovascular surgical resident on call is instructed by the Head of the Division of Cardiovascular Surgery to make rounds each morning and to make evening rounds on the cardiac ward and the Intensive Care Unit with the cardiac fellow on duty.

An additional registered nurse has been added to each team in the cardiac ward, and a new protocol was established to be applied for any death occurring on the cardiac service. The following is the protocol, dated April 13, 1981, which supersedes an earlier protocol, dated March 30, 1981, which was of a more limited nature. This protocol appears to be still in place.

THE HOSPITAL FOR SICK CHILDREN

Memorandum

From: W. J. Douglas Snedden Date: April 13th 1981
To: See below: Subject: CALL 25 and Ward 4A and B

The following supersedes a previous memorandum to the Night Nursing Supervisor on the protocol instituted March 30, 1981.

In the event of a call 25 on Ward 4A and B and in addition to the usual calls to parents, cardiac fellow and responsible cardiologist (or cardiologist-on-call), the associate resident on call will be responsible for ensuring that the following protocol is observed:

Blood for digoxin level is to be drawn as soon as practical after the cardiac arrest and sent for immediate analysis (call Clinical Biochemist-on-call). This examination will take approximately two hours to complete.

If the patient dies, whether that event occurs on 4A or B or after transfer to the ICU, the body, the bed, the equipment, the intravenous lines, and all solutions used must be left untouched until the result of the digoxin level is known.

If the digoxin level is within acceptable range for the clinical circumstances, as judged by the responsible cardiologist (or cardiologist-on-call), the usual nursing and medical procedures after death are then to be followed.

If the digoxin level is abnormally high for the clinical circumstances as judged by the responsible cardiologist (or cardiologist-on-call) the following individuals are to be called and informed of the circumstances immediately:

Mr. J. Douglas Snedden 231-5024
Mr. R. D. Rowe 482-9067
Administrator-on-call

(Signature of J. D. Snedden)

Distribution:

Miss E. Geiger
Chief Resident, Paediatrics
Mr. J. Douglas Snedden
Mr. R. D. Rowe
Mr. J. Press
Dr. J. Phillips
Dr. Ross Bennett, Deputy Chief Coroner
Dr. G. Hill
Staff Cardiologists
Head Nurses 4A and B
Area Co-ordinator

As has been previously noted, a principal recommendation arising from the Mortality Reviews conducted in the fall of 1980 and January 1981 was for the establishment of an Intermediate Care Unit for wards 4A/B. Although this recommendation had the complete support of the medical staff, it appears to have had resistance from Nursing who had reservations about the advisability and feasibility of such a new unit. This appears to have delayed the installation of this unit. Approximately $100,000 in new cardiac equipment was purchased and installed for the new unit. Additional nurses were hired, and the unit is now in use. In addition, there is a complete re-organization of nursing in wards 4A/B under the direction of one head nurse and two assistant head nurses, which matter is referred to in the chapter dealing with nursing. In the view of the Committee, all these changes are positive steps which cannot help but improve the quality of patient care in this Division.

Mortalities

It is apparent from the schedules and diagrams reproduced above, and from the other statistical information which the Committee reviewed, that, between the months of July 1980 and March 1981, the number of deaths in the cardiac wards was far in excess of what had been the previous experience in the Hospital. Since that time, however, there has been a dramatic decrease in the number of cardiac ward deaths which, from a statistical point of view, is completely consistent with the experience in the Hospital prior to July 1980.

The Committee has found no evidence of any untoward deaths in the cardiac wards since March 25, 1981, to August 1982, and the reason for those deaths appears to have been fully explained in the medical charts.

The total number of deaths in the Hospital of patients with cardiac ailments has not altered in any material respect over the years between 1975 and 1982, after giving effect to normal cyclical patterns. However, the Committee's examination also included a detailed review of the medical charts of those patients with cardiac ailments who died between March 25, 1981, and August 1982, other than in the cardiac wards. These deaths occurred in the operating room, in the Intensive Care Unit and in the neonatal wards. With respect to those deaths, the Committee also found no

evidence of any unexplained deaths and, again, the reason for those deaths appeared to be fully explained in the medical charts.

Digoxin Tests

As has been observed since March 25, 1981, there has been a careful monitoring of the digoxin levels of all patients and a digoxin level test has been included in all post-mortems in the Hospital.

On the basis of information provided, the Committee found no evidence that any patient in the Hospital who died between March 24, 1981, and October 1982 did so as a result of a digoxin overdose.

With further study there has been a re-evaluation of what is now considered normal for therapeutic post-mortem values, and the results of any test that might be questionable were promptly reported to the coroner.

As appears from the analysis of post-mortem digoxins set forth above, in seven cases digoxin levels were reported for patients who had not been prescribed digoxin in the Hospital. They are of such minimal values that they do not warrant a conclusion that in those cases there were medication errors. In any event, it is clear that none of those patients died from an overdose of digoxin. However, as will be noted subsequently, there have been some cases of medication errors with respect to the administration of digoxin, none of which appeared to have had any adverse effect on the patient.

Prior to March 1981, post-mortem digoxin levels were not taken as a matter of routine in all Hospital deaths. It was not until the confirmation of a toxic digoxin level with respect to the patient Kevin Pacsai was received late in March 1981 that a digoxin overdose was first viewed as a possible factor in the cardiac deaths which had occurred in the cardiac wards between July 1980 and March 1981.

As also previously noted, in the Mortality Reviews conducted in the fall of 1980 and the early part of 1981, toxicology was not considered as a matter for further investigation. In fact, however, there had been a post-mortem digoxin level taken following the death of Janice Estrella. As set forth earlier, the report of the digoxin level was so far in excess of thera-

peutic levels that no heed was given to it; it was considered either an error in calculation, a laboratory error or the result of a contaminated sample. Because of the absence of any prior history of digoxin related deaths, the original questioning of the validity of the test would, under other circumstances, be understandable. Little was known at that time as to the validity of such tests or as to their significance.

However, the result of that digoxin level test was received at the very time that studies were under way relating to the increased number of deaths in the cardiac wards. Under those circumstances, caution at least should have dictated further inquiry. There is some suggestion that a further test was directed. No such test was made, and there appears to have been no follow-up. We think that something further should have been done before the result of that test was rejected out of hand.

In future we think further inquiry must be made of any laboratory results which indicate something out of the ordinary, even under circumstances which render the original result questionable.

Mortality Reviews

Mortality reviews represent one of the most important procedures to test the adequacy of patient care and the procedures in place to protect the safety of the patient in the Hospital. It is from such analysis that weaknesses in the patient care system can be detected and procedures put in place to improve upon past practices. In many cases a close analysis will disclose that nothing further could have been done. In others, errors may be detected, or even short of error, safer practices may evolve. Such a procedure is necessary in the case of every death. Although mortality reviews have been conducted in the past within the Hospital with respect to each death, they appear to have been rather unstructured. For the most part, they have been conducted only by those who had care of the patient. It has been felt that only those within the department or the division in whose care the patient had been placed have sufficient expertise to cast light on any problems which may have arisen. That is the manner in which the mortality reviews of the deaths which had occurred in the cardiac wards commencing in the summer of 1980 were conducted.

However, something more than the usual reviews conducted of an individual death was necessary. Viewed individually, there did not appear at the time to be any cause for concern. It was the increased number of the deaths, their timing and the inability to resuscitate which required an intensive review. It was, therefore, necessary to determine whether any unusual features with respect to those deaths could be discovered. But the reviews conducted in September, consistent with past practices, were confined to cardiologists, subspecialty cardiac fellows and nurses from within the Cardiac Division.

In the more intensive review conducted in January 1981, the representation on the Mortality Review Committee was expanded to include cardiac surgeons and intensivists, but again those who attended were only those who had the direct responsibility for the care of cardiac patients. As has been noted, there was no inter-disciplinary representation. There was no pathologist, general surgeon, general paediatrician, clinical pharmacologist or epidemiologist present.

We think it is an unsafe premise to stand firmly to the view that assistance in mortality reviews can only be obtained from those who have the immediate responsibility for the care of the patient. It is the view of the Committee that there should have been broader representation on those Mortality Committees. Other insights may have been brought into the discussion. That is not to say that broader representation would necessarily have resulted in other conclusions or recommendations. We think that it would be manifestly unfair to suggest that foul play, if such there was, with respect to any of the deaths, should have been a factor for consideration. But a clinical pharmacologist may have raised the question of toxicity. An epidemiologist may have zeroed in on personnel. Again, without any thought of foul play, a more thorough analysis would have disclosed the higher incidence of deaths of patients under the care of one nursing team. Caution may have prescribed a change in the assignment of that team, if for no other reason than to relieve them of the manifest emotional pressure under which they were working. A general paediatrician or a general surgeon may have been able to make some contribution in determining whether any unusual features could be discovered relating to these deaths, or whether they were the result of natural causes. Such an expanded committee may well have concluded that the problem was more serious than others thought it to be.

The Committee is satisfied that those conducting the mortality reviews did so with the highest motives, consistent with past practices at the Hospital. But the procedure adopted gives the impression that those directly involved were passing judgment on themselves. The manner in which the mortality reviews were conducted with respect to these deaths indicate the need of a more formalized and expanded mortality review system throughout the Hospital.

Of equal concern was the failure to bring what was perceived to be a problem within the Cardiology Division, which may have reflected on the quality of the patient care, to the attention of others in the Hospital charged with the responsibility for the quality of patient care. The matter was not promptly brought forward to the Medical Advisory Committee, the senior medical committee charged with monitoring the quality of patient care in the Hospital, nor was it brought promptly to the attention of the Patient Care Committee or the Risk Management Committee until after the intervention of the coroner and the police.

As has been noted, the matter was first brought to the attention of the acting Administrator in January 1981, following the mortality review meeting held in that month. It was not done, however, in a manner to impress him as having the potentiality of being a serious problem. It was not until well into March of 1981, and coincident with the time of the intervention of the coroner and the police that a full report of the conclusions and recommendations of the Mortality Review Committee was formally submitted to Administration. The Board of Trustees do not appear to have been alerted to a problem which could have a serious impact on the Hospital until late in March of 1981. All of this, in our opinion, underscores the importance of a medical presence within Administration. If there had been such a presence, this problem obviously would have had to be reported to him and, with his medical background, he would have had a better appreciation of its seriousness.

Although the Committee is satisfied that there was no deliberate attempt to withhold information from others, the failure to communicate the nature and extent of the problem to medical committees, Administration, and the Board gives that appearance and discloses a weakness in the procedures in place in the Hospital to ensure the quality of patient care and the safety of those patients.

Reports to the Coroner

Pursuant to the Coroners Act, amongst other matters, there is a duty imposed on every person who has reason to believe that a deceased person died suddenly and unexpectedly to immediately notify a coroner of the facts and circumstances relating to the death. The coroner is then empowered to conduct an investigation and to determine whether an inquest is necessary or unnecessary.

In the case of deaths in hospitals, the determination of what death should be reported to a coroner is, in most cases, a matter of judgment. The matters which a coroner's inquest would be directed to inquire into are generally known. The principal concern of the coroner relates to those cases in which there may have been something untoward about the deaths.

In a hospital a patient may be said to have died suddenly or unexpectedly without any indication of anything untoward happening. Following delicate cardiovascular surgery, for example, patients do die at a moment in time when it can be said to be unexpected. It does not follow that there is anything untoward, but that the death was incidental to the surgery, even though the moment in time when the patient would pass away may not have been anticipated.

As has been noted above, of the 15 deaths with respect to which concern was expressed in the mortality review conducted in January 1981, eight deaths had been promptly reported to the coroner. No further investigation at that time was considered to be appropriate. Even on the initial report to the coroner of the death of Kevin Pacsai, no further investigation appeared to have been warranted until the report of the post-mortem digoxin level.

Having regard to the number of deaths which were in fact reported to the coroner, we do not think that the failure to report all of them was by reason of a deliberate attempt to withhold information from the coroner. With the benefit of hindsight, it might have been preferable to have promptly reported all of those deaths to the coroner.

Since March 1981, the Hospital has been in constant touch with the coroner's office. At the end of August 1981, the Chief of Pathology noted that there were 12 autopsies in that month which related to patients who

had a cardiac ailment. Viewed individually, the cause of death in each case appeared to have been fully explained. However, because of such a large number of cardiac-related autopsies in the one month, it was felt appropriate to have all of them carefully reviewed. A Mortality Review Committee meeting was convened.

In this case, there was the broadest type of representation on the Mortality Review Committee, and it included cardiologists, cardiovascular surgeons, intensivists, clinical pharmacologists, pathologists, and the Chiefs of General Surgery and of Paediatrics. Two coroners were also invited to attend.

Each case was thoroughly reviewed. Only two of the deaths had occurred in the cardiac wards. It was agreed that all deaths were fully explained. There was also a full discussion to clarify the type of case which ought in the future to be reported to the coroner. A similar number of autopsies which related to patients who had a cardiac ailment was also detected by the Chief of Pathology for the month of September. None of these deaths occurred in wards 4A/B. However, out of an abundance of caution, a very broad Mortality Review Committee was struck in October to review those deaths, again with the attendance of the coroner. Nothing untoward was detected.

As it turned out, it was probably unnecessary to report all these deaths to the coroners, or to seek out their attendance at such a meeting. But when the number of deaths indicated the possibility of a trend, it was a wise course for the Hospital to have taken.

It is also to be noted that the very broad inter-disciplinary representation on the Mortality Review Committee convened in August and October is a pattern which we think should be followed in the future.

Chapter XI

Patient Steven Yuz

Steven Yuz, eight years of age, a patient at the Hospital for Sick Children, died on February 20, 1980. His death was reported to the coroner, and a coroner's inquest was held in April and May of 1980. The jury concluded that "Steven Yuz died as a result of his debilitated state; as a result of a cardiac arrest; as a result of dehydration; as a result of inadequate I.V. therapy;" and made the following recommendations:

1. That consideration be given to a re-examination of the "chain of command" chart, as given to the jury, for the purposes of

   (a) Improving the interfacing process of hospital staff.

   (b) Reviewing and delineating ward responsibilities to provide for a more effective and manageable work load and an improved communications network.

   (c) Reviewing the role description of the senior resident.

2. That treatment for diagnosis of a psychogenic causes not be commenced until a complete organic investigation has been done and has been professionally assessed to be normal.

3. That specific procedures be established for the treatment of patients diagnosed to be in a state of dehydration. This should include time intervals for the taking of lab tests and specific instructions to those responsible for the patients' care relative to assessing and reporting vital signs.

4. That the nursing staff be required to call a qualified staff doctor immediately on observing vital sign fluctuations beyond normally accepted limits. Nurses should be encouraged to participate more actively in the care of seriously ill patients by initiating discussions with the medical staff doctors regarding any abnormalities observed in the patient management processes.

5. That the calculation of dangerous drug dosages be countersigned by the initiating doctor's immediate superior.

6. That doctors entering into the management of a patient for the first time be required to read all documentation pertaining to that patient and be required to conduct a complete physical examination before writing any new doctor's orders.

Upon signing-off the patient to a new doctor recorded consultation should be mandatory for the purpose of familiarizing the new doctor with the patient's condition and relevant history.

7. That the ward chief be responsible for assigning medical staff to patient care through the matching of patient needs with doctor experience and expertise.

COMMENT

As previously noted, the death of Steven Yuz has been the subject of civil action, and the circumstances surrounding his medical treatment are currently under review by the Health Disciplines Board. Thus, a detailed discussion is inappropriate. For our purposes, however, two important matters of procedure in the Hospital, which came to light as a result of this case, are of some significance.

In an effort to initially diagnose the cause of the abdominal pain and vomiting, a barium enema was performed by the senior fellow in radiology and was reported as being normal. This, along with negative physical findings, suggested the likelihood of a psychosomatic cause for the vomiting resulting in psychiatric treatment for an extended period instead of possible earlier surgical intervention. Although there is no reason to question the qualifications of the senior fellow in radiology, who had great expertise, contrary to established practice, the x-ray examination was not double checked and signed by a staff radiologist. Subsequent investigation indicated that a different judgmental evaluation of that x-ray might have been made.

In addition, the subsequent treatment of this patient indicated a breakdown in the relative responsibility of the ward chief, the admitting physician, and the resident staff. At all times there must be one responsible physician who is accountable for the care of a patient. The treatment of this patient indicated a lack of a clear definition in the Hospital at that time as to who was in fact the responsible physician, particularly where the patient is receiving assistance from various quarters.

Following the coroner's inquest, the Hospital invited a very distinguished group of experts from outside the Hospital, headed by Dr. McGregor, to review the procedures and make recommendations: The reason for doing so was twofold: 1) to reassure the public of the Hospital's anxiety

concerning errors related to the case, and 2) to openly demonstrate a sincere commitment to take corrective action by bringing in outside expert assistance.

With respect to the matter of "the responsible physician", Dr. McGregor's Committee concluded as follows:

. . . . .

The Committee concluded that in the general pediatric wards the definition of responsibility required clarification. Though unclear definition usually did not matter or impair clinical care in any way, it was a potential source of problems.

. . . . .

The Committee concluded that in the specialty wards of the Department of Pediatrics there should exist clear descriptions of the relative role of the private physician and ward chief and that these should coincide with actual practice. Further, consideration should be given to correction of the billing practices of the partnership, Pediatric Consultants, so that fees either be rendered in the name of the partnership as a whole or should reflect the contribution of the individual in whose name they are collected.

. . . . .

There can only be one responsible physician at any time and it must be clear to all who that is.

. . . . .

The principle is clearly acceptable that in different areas of the hospital different practices will be appropriate. Furthermore the appropriateness may change with the passage of time. Thus, practices should be repeatedly reviewed. At the present time there are some areas in which transfer of responsibility to the Ward Chief (or to another specialist) should be mandatory while in other areas the Private Physician may have the option to retain full responsibility for his patient after admission. Thus two systems could operate within the Department:

System 1

Responsibility for all patients to rest with the Ward Chief (or other nominated specialist).

At the time of admission of a patient, responsibility for care is transferred from the Private Physician to the Ward Chief. The Private Physician may make himself available to parents and to the Ward Chief to facilitate communication but does not resume responsibility until the patient is again discharged into his care.

Such a system seems appropriate at this time in the following wards: Cardiology, Neonatology ICU, Neurology, Hematology, Nephrology, GI, Chest, Immunology.

System 2

Optional transfer of responsibility

This solution recognizes that cases vary, that some patients require almost continuous medical care which a Private Physician cannot always give because of outside commitments, and that physicians vary, some being able to and prefering to maintain responsibility, while others may prefer to hand over. It is necessary only that the responsible physician, whether Private Physician or Ward Chief, should assume full responsibility and should be available for whatever time is necessary to fulfil this responsibility.

Under this system it is possible for responsibility for a patient to be transferred to the Ward Chief or retained by the Private Physician. In the latter case, the Ward Chief is the responsible physician of those patients who were admitted without a Private Physician and of those patients tranferred to him by the Private Physician. He carries, in addition, the delegated authority of the Physician-in-Chief to insure the quality of care for all the patients in the ward. This in no sense diminishes the responsibility of the Private Physician in respect of those cases for whom he has chosen to be the responsible physician. The Committee warmly supports a submission by Dr. Carver to the Committee which clearly outlines this system [See below].

Inherent in this system is the absolute necessity that the Private Physician will, at the time of a patient's admission, "formally, in writing acknowledge undertaking responsibility for the care of his patient, or else formally relinquish the responsibility, in writing to the Ward Chief or another staff pediatrician". Likewise, the name of the responsible physician, whether Ward Chief or Private Physician, must appear on a sign near the patient's bed, appear on each page of the ward chart and be changed if ever the name of the responsibile physician is changed, and be notified in writing to the relatives at the time of admission.

It would seem appropriate at the present time that this type of option should be available on some or all of the general pediatric wards and on the following special wards: Neonatology (7F), Endocrinology (in the case only of diabetic patients) and Infectious Diseases.

. . . . .

The submission of the Chief of Paediatrics with respect to the matter of "the responsible physician" referred to and approved by the McGregor Report is set out hereunder:

October 23rd, 1980

PATIENT CARE RESPONSIBILITIES

Care of patients on the Paediatric Wards in The Hospital for Sick Children is provided by a team of physicians. One physician must, however, have the final responsibility for the care of each patient. This physician will be called the "Responsible Physician". This memorandum sets out the procedures that will be followed on the Paediatric Wards:

1. The In-patient Paediatric Wards are divided into general wards and subspecialty wards.

2. The general wards include 4C/4D (General Ward: Infant & Young Children), 6D (Chest), 6C/7E (General Ward: Older Children), 7C/7D (Infectious Diseases) and 7F (Neonatology).

3. The subspecialty wards include 4A/4B (Cardiology), 5F (Neurology), 7G (Neonatal Intensive Care Unit), 8A (Endocrinology/Gastroenterology), 9 (Haematology/Oncology), 5D (Nephrology), and ICU (Intensive Care Unit).

4. For each patient admitted to the Paediatric Wards, the Responsible Physician will be named and assume the following responsibilities:
   (a) write an admitting note on the patient's chart on the special form provided in an appropriate time not to exceed 24 hours after admission;
   (b) develop a plan for the care of the patient with the house staff including proposed diagnostic and therapeutic procedures;
   (c) evaluate the patient daily or more often, if necessary, and make appropriate changes in the plans for the patient with the house staff. He or she must be aware of all significant changes in the patient's course and in the plans for the patient;
   (d) be available for communication with the house staff at all times, and
   (e) communicate with the patient's family in conjunction with the house staff.

5. The Responsible Physician will automatically be the Ward Chief except as noted below.

6. Paediatricians with full staff privileges can assume the responsibilities of the Responsible Physician on the general wards if
   (i) at the time of admitting the patient, the Paediatrician acknowledges in writing that he/she will undertake the responsibilities for the patient outlined in Para 4 above on a specific hospital form provided for this purpose. Such a form can be filled out in the physician's office outside the Hospital and sent with the patient to the Hospital when admission is planned; or

(ii) within 24 hours after admission the Paediatrician fills out and signs the specific form at the Hospital.

7. Paediatricians with expertise in the respective subspecialties will be designated by the Division Chief responsible for each of the wards. Such designated Paediatricians can assume the responsibilities of the Responsible Physician on the subspecialty wards if
   (i) at the time of admitting the patient the Paediatrician in writing acknowledges undertaking the responsibilities for the patient outlined in Para 4 above on a specific hospital form provided for this purpose. Such a form can be filled out in the physician's office outside the Hospital and sent with the patient to the Hospital when admission is planned; or
   (ii) within 24 hours after admission the Paediatrician fills out and signs the specific form at the Hospital.

8. The Ward Chief will be the Responsible Physician for every patient admitted to the Hospital without the specific Hospital form provided for this purpose until such time as the Paediatrician signs the specific form at the Hospital. Unless the form is signed within 24 hours, the Ward Chief will be the patient's Responsible Physician for the duration of that admission.

9. The Responsible Physician's name will appear on the sign at the end of the patient's bed and on the addressograph plate on each page of the patient's sheet.

10. In the event that the Responsible Physician will not be available to carry out his daily responsibilities, he may request the Ward Chief or another staff Paediatrician to assume the role of the Responsible Physician for a period up to 48 hours. This must be noted on the patient's ordersheet.

11. The Ward Chief, whether he is designated as the Responsible Physician or not, will supervise the care of all patients on his ward and will review the plans for all of the patients on his ward. He must write a note in each patient's chart. He will then directly communicate with the Responsible Physician if he disagrees with the plans for a given patient and if they cannot resolve this matter, they must take the problem to the Physician-in-Chief. The Ward Chief must communicate with the Physician-in-Chief any concern he has about patient care. The Ward Chief has the responsibility to ensure the quality of care for all of the patients on the ward and carries the delegated authority of the Physician-in-Chief to carry out this responsibility. The Chain-of-Command is as noted on the enclosed diagram from the Physician-in-Chief to the Ward Chief to the Responsible Physician.

12. The Post-Core Resident on the general wards (or the subspecialty resident on the subspecialty wards) is in charge of all house officers working on the ward. He or she is responsible to the Ward Chief for maintaining the best possible care for all of the patients on the ward.

13. The house staff and Responsible Physician must discuss with each other the diagnostic and therapeutic management of the Responsible Physician's patient at the time of admission, whenever there is a significant change in the patient's condition, and at the time of discharge. It is the responsibility of the house staff to call the Responsible Physicians about their patients and it is the responsibility of the Responsible Physicians to be available to speak with the house staff.

14. Core I and Core II residents must immediately call the Post-Core resident or Subspecialty resident in charge of a ward when a patient has a problem. The Post-Core resident should call the Chief Resident or Associate Chief Resident on duty (on a subspecialty ward the appropriate Fellow should be called) whenever a problem is of sufficient seriousness to merit their additional help in patient care. In all cases whenever a serious problem occurs, the house staff must call the patient's Responsible Physician and the Ward Chief.

15. A Paediatrician with full staff privileges who has NOT assumed the responsibility of the Responsible Physician will be entitled to visit his patient on the ward and to discuss his progress and treatment with the Responsible Physician and the house staff. He will NOT issue instructions to the house staff. Any suggestions he may have will be discussed with the Responsible Physician who is responsible for any directions given to the house staff. He will, of course, maintain his continuing relations with the parents of the patient.

AMENDMENT to Patient Care Responsibilities
dated October 23rd, 1980

Add Para. 10 (a)

On a subspecialty service where a single individual is the Responsible Physician for all of the patients on the service, the House Staff and Fellows should know who is responsible for the whole service during nights and weekends. This will fulfill the requirement for documenting who is the Responsible Physician.

In addition to the McGregor Report, the Hospital immediately conducted an intensive internal examination as to the circumstances surrounding the death of Steven Yuz, and the Internal Committee made recommendations largely in line with the recommendations of the coroner's jury and the McGregor Report.

We set out hereunder from the submission made to the Committee by the Hospital a summary of the actions taken by it in response to the coroner's jury's recommendations:

THE HOSPITAL FOR SICK CHILDREN
ACTIONS TAKEN RE CORONER'S JURY RECOMMENDATIONS
STEVEN YUZ CASE

1. That consideration be given to a re-examination of the "chain-of-command" chart, as given to the Jury, for the express purposes of:

   (a) Improving the interfacing process of hospital staff.
   (b) Reviewing and delineating ward responsibilities to provide for a more effective and manageable workload and an improved communications network.
   (c) Reviewing the role description of the Senior Resident.

   ACTION
   This recommendation is the key issue. It relates mainly to the Department of Paediatrics, and, more directly to the General Paediatrics Wards. Under the McGregor report, it has been accepted that the "responsible" physician for all patients shall be identified to the parents, his name shall be on all documents, and shall be placed on the head of the patients' beds. This procedure is approved and will be implemented shortly.

   All Departments are writing or have written specific terms of reference and responsibilities of the Physician, the Consultant and the Resident.

   The Resident workload has been studied and adjusted as far as possible, as proposed by the McGregor Report. The problem of added numbers to decrease the load, at a point in time when Resident Staff number are being decreased, has led us into studying the level of care required, and the means of supplying such care. These studies continue.

   A new division of General Paediatrics has been approved which will assist in the direct supervision of care, and improve the "chain-of-command" to the Ward Chiefs and the Residents in this Division.

2. That treatment for a diagnosis of psychogenic causes not be commenced until a complete organic investigation has been done and has professionally be assessed to be normal.

   ACTION
   Accepted. The approved procedure is that all preliminary diagnoses of psychogenic vomiting require a consult with the Gastroenteritis Division before the diagnosis can be confirmed.

3. That specific procedures be established for the treatment of patients diagnosed to be in a state of dehydration. This should include time intervals for the taking of lab tests and specific instructions to those responsible for the patient's care, relative to assessing and reporting vital signs.

ACTION
Accepted. This is routine but to augment routine, a revised flow sheet has been designed and placed in use to ensure accurate charting.

4. That the Nursing Staff be required to call a qualified Staff Doctor immediately on observing vital sign fluctuations beyond normally accepted limits.

   In this same context, Nurses should be encouraged to participate more actively in the care of seriously ill patients by initiating discussions with the Medical Staff Doctors regarding any abnormalities observed in the patient management process.

   ACTION
   This is routine procedure and has been reinforced by follow-up instruction to Nurses.

5. That the calculation of dangerous drug dosages be countersigned by the initiating doctor's immediate superior.

   ACTION
   Not accepted. The definition of "dangerous" is the first problem since most drugs can prove dangerous in some circumstances. The "immediate superior" is a second problem which is not acceptable since extensive delays could be encountered in giving medication. The action has been to reinforce checking of calculations of drugs by a second person where possible.

6. That doctors entering into the management of a patient for the first time be required to read all documentation pertaining to that patient and be required to conduct a complete physical examination before writing any new doctor's orders.

   Upon signing-off the patient to a new doctor, a recorded consultation should be mandatory for the purpose of familiarizing the new doctor with the patient's condition and relevant history.

   ACTION
   This routine has been reinforced by instructions for a complete examination of the patient and charting the results at a hand-over of a patient, and that the medical history will clearly indicate on the chart that a new physician has taken over a patient.

7. That the Ward Chief be responsible for assigning Medical Staff to patient care through the matching of patient needs with doctor expertise and experience.

ACTION
Assume this means that for the more difficult the case, the more experienced the physician is assigned. This is current good care and has been reinforced in rounds.

In addition, the Hospital has re-emphasized its policy that all x-rays must be double checked and signed by a staff radiologist before an opinion is rendered.

The Committee is satisfied that the Hospital has taken all reasonable steps to improve any deficiencies in its practices and procedures which were disclosed as a result of the death of Steven Yuz.

We think, however, that further monitoring is necessary to see that the new practices and procedures are strictly adhered to.

Chapter XII

Patient Rafiki Cruise

On October 28, 1981, Rafiki Cruise, age three and one-half years, died in ward 7B at the Hospital for Sick Children. Rafiki had a tracheotomy from the age of two months to compensate for a narrowing of her airway. This necessitated her return to the Hospital for a routine bronchoscopy on several occasions, which was the reason for her last visit.

An inquest was held during the week of January 11th, 1982. The Coroner's jury found that Rafiki Cruise came to her death as a result of asphyxia (upper airway obstruction). The following recommendations were made:

1. That the Hospital for Sick Children develop and implement, in particular for tracheostomy patients of minor age, a flow chart for patient monitoring purposes on which all services provided to a patient are recorded including specific notation of each bodily function, including suctioning and amount, thickness and colouration of mucous removed. The time is to be noted as to when this function took place. We believe this will remove some "discretionary" interpretations.

2. Nurses and doctors examining patients should do so after review of the flow chart, signifying review by initialling after the last entry thereon. A review is from the first entry on the chart to the last, or from the last time the reviewing individual initialled the chart to the last entry recorded thereon.

3. Nurses coming on shift are, before nurses going off shift leave, to review all charts, check, physically "hands-on" all patients and then sign that they have taken over. At that time nurses going off shift are then to sign out.

4. The Hospital for Sick Children is to expedite research into satisfactory audio, video or combined A/V monitoring equipment to monitor sound and movement patterns in all patients of minor age with specific direction to those with respiratory difficulties. We would suggest this be done in concert with the Ministry of Health and perhaps involve an interchange of information, findings and needs amongst other Children's Hospitals throughout North America. In this day and age the technology exists to build or construct such apparatus.

5. During what is purported to be the peak volume time, i.e., feeding, changing, preparing patients, an aide should be provided in all constant care rooms. Possible sources for suitable personnel could be -

   i) student nurses at community colleges.

   ii) student in the social work field university or community colleges, teachers colleges.

   iii) Church womens auxiliary groups.

   Aides would perform no medical duties but would feed children, change diapers, obtain linen type supplies, perhaps wash room supplies (glasses, etc.) and make beds. We envisage this support staff as voluntary but recognize to obtain same some effort on the part of the administration staff at the Hospital for Sick Children will be necessary. If the appropriate arrangements between the outside support groups and hospital administration cannot be worked out then serious consideration must be given to hiring part time personnel to perform aide duties.

6. Of paramount importance is the fact medical staff duties to support and maintain life must not become secondary to housekeeping duties.

7. We recommend monthly meetings of nursing staff in '7B' and Room 705. In general this should be standard procedure throughout the hospital to attain a common level of knowledge.

8. The Communications booklet should be read by all nurses in 7B and 705. Each nurse working there should initial a master copy that they have read same and have their own permanent copy into which updates should be inserted.

9. Hospital Administration is to form a free standing procedural implementation committee comprised of a doctor, a senior nurse and an administrator. This committee should have discretionary authority to implement procedural changes recommended by staff to eliminate the current upward reporting stream prior to implementation of new procedures. This could have significant time saving consequences.

10. Concise and precise definitions, in printed form if need be, are to be worked out amongst doctors, experienced nurses and administrators as to constant care, what it means, what is required, when, how, why if need be and by whom. This should assist in achieving a common level of knowledge in a time when we are advised experienced medical support staff are difficult to obtain and possibly retain.

COMMENT

Two similar incidents that had occurred in ward 7B before the death of Rafiki Cruise were brought to the attention of the Review Committee. All three incidents were similar, in that it appeared that during the critical time there was inadequate supervision and leadership at the nursing level.

On ward 7B, rooms 705 and 706 make up the Tracheotomy Unit. There are six patients and two nurses per room. The length of stay of patients ranges from a few days to several months. Those children who are admitted for an extended period of time become well known to the staff, who can respond to their individual needs. Patients admitted for shorter periods of time are not known to the staff and may require closer supervision. Nurses inexperienced in tracheotomy care were often assigned together. Patients were treated routinely without regard to the individual needs of those patients who were unfamiliar to the nurses.

Following the inquest Mrs. Cruise sought information from the Hospital as to what steps the Hospital was taking to implement the recommendations of the Coroner's jury. Mrs. Cruise is very intelligent and thoughtful, and a fair person. The initial response by Administration to her inquiry was, we think in this case, insensitive and casual. Mrs. Cruise persisted, however, in seeking to have changes put in place which would prevent a re-occurence of what had happened to her child. As a result of further dialogue, and after review by the nursing and medical staff, the following changes have now been instituted to improve the quality of care on ward 7B:

1. A flow chart has been developed detailing the frequency of suctioning and the characteristics of mucus obtained from tracheotomized patients. This flow chart is kept at the patients' bedside.

2. It is now standard practice to have a walk around "hands on" hand over round at shift change as opposed to a sit-down round.

3. A larger number of patients are now being monitored by a heart monitor and/or an apnea monitor.

4. An attempt is being made to ensure that the nursing staff are aware of the individual needs of patients by documenting status with respect to tracheotomy dependency.

5. A clinical instructor for tracheotomized patients has been appointed to Ward 7B. The clinical instructor's role will be to educate all 7B staff, to maintain a high level of vigilance in the regular staff and to liaise and teach other ward staff to deal with a tracheotomy patient.

As a result of providing tracheotomy care at home for their child, parents are in a position to know the individual needs and responses of their child. The Review Committee feels that the Tracheotomy Unit is therefore ideally suited for increased parental involvement in the care of their child. We are also of the opinion that particular vigilance is necessary when posting nursing assignments to ensure that there is always at least one experienced nurse assigned to each team. In addition, nursing orientation should be geared to the specialty of the area to which the nurse will be assigned.

The Review Committee is satisfied that there is now a real effort being made to improve the quality of care for tracheotomy patients. Further staff meetings are planned with this goal in mind.

Chapter XIII

Patient Jonathon Murphy

Early in January 1982, five infants in three different rooms in neonatal ward 7F exhibited similar symptoms of illness. Immediate action was taken in an endeavour to identify the cause. Infectious disease was suspected.

The staff epidemiologist was assigned to head the investigation under the direction of the Chief of Paediatrics. Municipal, Provincial and Federal health officials joined in carrying out epidemiological studies.

On January 21st, patient Jonathon Murphy was transferred from ward 7G to ward 7F. On January 22nd he became ill. On January 23rd the ward was closed, and patients transferred to ward 5A. On January 25th baby Murphy died. On January 26th, to ensure that every avenue was explored, a team of investigators from the Center for Disease Control in Atlanta, Georgia, joined in the investigation. The Center for Disease Control investigation began on January 28, 1982, and continued until it was indicated that a medication error was the cause of the illnesses of these patients.

Epinephrine and vitamin E were purchased from the same manufacturer. The bottles of each bear the same logo and colour design, and in the absence of a careful reading of the label, the bottles are quite indistinguishable.

The patients apparently had been administered racemic epinephrine rather than vitamin E. Samples of blood were sent to the National Institute of Medical Health in Bethesda, Maryland, and the test for racemic epinephrine was positive. The Hospital requested the Chief Coroner of Ontario to conduct an inquest.

The Coroner's Jury at the inquest into the death of Jonathon Murphy found that Jonathon Murphy came to his death as a result of the accidental administration of epinephrine through the nasogastric tube. The following recommendations were made:

1. That all medications should be discarded by being returned to the pharmacy when the patient for which that medication was prescribed is tranferred to another ward, discharged or no longer needs the drug prescribed.

2. That [there be implemented] continuous follow-up training of staff, nurses and pharmacists to keep them aware of the importance of adhering strictly to such rules as reading a label three times and not becoming too familiar with any label as to forego this practice.

3. That the borrowing of any drugs, either prescription or stock, from another ward should be discontinued as this leaves room for error. In a case of extreme emergency only, borrowing may be permitted but the transaction must be recorded by signature for the drug by a team leader or [a person of] equivalent [authority].

4. That should a situation arise when a cluster of illnesses occurs and the cause is not clear, tests and samples taken should be properly stored and colour coded for easier identification in case of a need for retrospective studies.

5. That the monitoring of drug inventory in ward medicine cabinets be conducted on a weekly basis and close supervision given to any drug which is suspected of being no longer required, dose limited by date, past expiry date etc., so that such drugs can be removed immediately.

6. That the practice already instigated by the hospital of over labelling all bottles of prescription drugs be continued until such time as the unit dose system is fully implemented.

7. That appropriate steps be taken to ensure that storage of drugs in hospital pharmacy is such as to reduce the possibility of filling orders with wrong drugs or medication.

8. That the unit dose system should be introduced generally to all hospitals as a positive way of reducing errors in drug administration.

In addition to the medication error relating to epinephrine, the investigation disclosed that digoxin levels were detected in three patients in neonatal ward 7F, for whom digoxin had not been prescribed. Two of the levels were under .5, which level is considered to be unreliable. One disclosed a level of 1.3. This medication had no adverse effect on the patient, but was as a result of a medication error on the part of a nurse who administered a digoxin dose to one patient, mistaking that patient to be the patient for whom digoxin had been prescribed.

COMMENT

In this case, we think that the Hospital is to be commended for the very thorough and immediate response to the resolution of the cause of the illness which had occurred in ward 7F. As has been noted, under the direction of the Chief of Paediatrics and the epidemiologist, all available steps were taken immediately to meet the problem which had arisen.

Although the similarities of the bottles of epinephrine and vitamin E afford some explanation of the medication error, it is apparent that the nurses did not comply with the basic instruction which requires a careful reading of the label of each bottle of medicine three times before administration. Furthermore, having regard to the similarity of the labelling, the necessity for the Hospital to over label such bottles in future is clearly indicated. There was also no ready explanation for the presence of epinephrine in the ward.

The investigation also disclosed at least one medication error in the administration of digoxin, notwithstanding that at this stage it had been designated as a controlled drug.

The Hospital has begun to put in place the recommendations of the Coroner's jury. Planning for a limited unit dose system for the Intensive Care Unit, which was started in 1980, was expanded to include the neonatal and cardiac units to incorporate the major recommendations of the Coroner's jury. Plans for a complete unit dose system throughout the Hospital are included in the Master Plan, but the medication errors disclosed on this occasion indicated the need for urgency of such action and led the Committee to a study of the practices in place for the administration of drugs, which is subsequently discussed at length in Chapter XV of this Report.

Chapter XIV

The Division of Neonatology

Part I

INTRODUCTION

The patient population cared for in the Neonatal Division of the Department of Paediatrics is comprised of some of the most seriously ill patients seen in the Hospital. Emergency situations are common and response time critical. The service also plays an active role in the transport of these critically ill infants.

One can divide the patients cared for in this unit into a number of categories:

1) Low birth weight infants, appropriately small for their gestational age (the typical premature infant). The major problem dealt with is immaturity of various systems, for example, lungs--requiring artificial ventilation.

2) Low birth weight infants, inappropriately small for their gestational age. These infants have failed to grow in utero because of insult during development, either environmental (german measles or other viral infections) or genetic disorders (chromosomal aberrations), malnutrition, etc.

3) Full term infants with various medical problems which occur during delivery or shortly thereafter, for example, infections, jaundice, trauma during delivery, bleeding.

4) Infants with congenital malformations, congenital heart diseases, abnormalities of the gastrointestinal or respiratory tract requiring emergency surgery.

5) Infants with complex metabolic problems either acquired or genetic, for example, uncontrollable low blood sugar (hypoglycemia), defects in protein metabolism, etc.

It is important to recognize that 50% of infants who die in the first year of life expire in the first few weeks of life. Approximately half will be low birth weight infants, usually below 1200 grams; the remainder will have congenital malformations such as congenital heart disease and neural tube defects.

Because of this diverse and complex group of patients and the Hospital's role in the regional perinatal program, the Hospital is required to maintain an "open door policy" and provide a unit which has significant swings in occupancy. The demands on all personnel (physicians, residents, nurses, respiratory technicians) and on laboratory services are extremely onerous.

The infants frequently receive emergency care and stabilization and then return to the original hospital for continuing care. For many of these infants the stay at the Hospital for Sick Children is approximately one week. On the other hand, many require hospitalization for months.

The Neonatal Intensive Care Unit (7G) was first introduced on a limited scale at the Hospital for Sick Children in 1962. Before then, low birth weight infants did not receive the benefit of the expensive high technology and the medical expertise which is now available.

In 1981, there were 1,519 medical admissions and approximately 100 surgical admissions in the neonatal service, which is the highest level of activity in that unit since its inception. In that year, there was also the lowest mortality rate. Survivors of very low birth weight have increased from approximately 30% to more than 85% without an increase and probably a decrease in the total number of handicapped. Of the number of admissions in 1981, 60% were referred to the Hospital from Metropolitan Toronto and 40% from outside Metropolitan Toronto. Six hundred and sixty of the

patients admitted arrived through the services of the transport team and 30% by air, excluding those admitted from New Mount Sinai Hospital and Toronto General Hospital, who arrived by way of a tunnel transport.

The Neonatology Division is also a principal resource for training in neonatal medicine at undergraduate, resident, and postgraduate levels in the province. It has also made a significant contribution to research and is actively involved with the community, both inside and outside the Hospital.

Part II

STAFFING

At present, the senior staff is confined to only the Head of the Division and two staff physicians, although five positions have been approved.

Ward 7G

Ward 7G is a Neonatal Intensive Care Unit. The facilities normally provide for 37 beds, but invariably the patient load is much higher, frequently as high as 47.

The senior staff are assisted by residents divided into four teams, one senior and one junior. Two teams are on during the day and one team is on at night. Each resident is normally called upon to work a 65-70 hour week. They in turn are supervised and taught by specialty residents (clinical fellows). These are individuals who have completed their core paediatric training. Most will have had at least one year's experience in special neonatal care and are engaged in acquiring further experience and training as specialists in Perinatal Medicine or as consultant paediatricians. At present, there are two senior fellows and five specialty residents.

Wards 7F and 7A

Wards 7F and 7A function as a secondary care unit accepting recovering patients from ward 7G and less severely ill neonates on referral. Approximately 80% of the patients in wards 7F and 7A, which have a total bed complement of 28 beds, are placed there from the Neonatal Intensive Care Unit. It is staffed by four part-time paediatricians in rotation, two junior and one senior resident. At present, there is no full-time neonatologist functioning in a supervisory role for this unit.

Nursing Complement

The normal staffing pattern includes one head nurse, five assistant head nurses or patient care co-ordinators, ten team leaders, 105 registered nurses, two clinical instructors, a ward manager and six nursing aides. These personnel are divided among four teams. A pool of 14 per diem nurses trained to work in that area is available to the staff, and the work supplied by these nurses results in the equivalence of eight full-time personnel. If persons are available in another part of the Hospital, they may be assigned to 7G although they may not all have previous experience in that ward. Seven additional RNs have been added to the staff over the past three years.

Nursing management of the unit is incredibly complex. It requires particular nursing expertise, which is not always available.

The Neonatal Intensive Care Unit is frequently over capacity, operating at 115% capacity during several months of 1981 and 1982. In one five-day period at the end of October and the beginning of November 1982, the census rose from 27 to 47 babies. Admitting that many babies during this period of time is in itself an enormous nursing care load.

The Neonatal Intensive Care Unit provides approximately 15.8 hours of nursing per patient per day as contrasted with the 24 hours of nursing per patient per day in the Intensive Care Unit where the work is similar. Thus, on occasion, there is a shortage of personnel.

The reduction of staff neonatologists from five to three has placed an additional burden on the nursing staff as well as on the residents, who, by reason of rotation, are often inexperienced.

Part III

NEONATAL TRANSPORT TEAM

The neonatal transport team, located on 7G in the Neonatal Intensive Care Unit, provides a total 24 hour/7 day week coverage of services. This is accomplished with a staff of 12 nurses and one head nurse. Two nurses are sent on each transport. Additionally, four part-time transport assistant positions have been utilized. These latter positions are filled by senior nurses on 7G who have undergone a shortened skill-oriented program and possess certain characteristics of practice, such as one year of level three experience on the neonatal ward. They do not practise any delegated medical procedures and provide assistance to the certified transport nurse. They may move into transport when a vacancy occurs.

The transport nurses are highly skilled and very experienced neonatal specialists. They are fully capable of performing the following delegated medical procedures:

- radial artery blood sampling
- endotracheal intubation
- management of ventilation parameters
- intravenous therapy
- resuscitation drugs
- chest x-ray interpretation
- emergency draining of pneumothorax (with 23 g butterfly)

The number of transports to which this team responded in the last three years can be summarized as follows:

1980 - 465
1981 - 622
1982 - 640 (to end of November 1982)

The numbers of calls are increasing significantly and are continuing at over 60 calls per month.

The types of patients transported in the last full year (1981) are represented by the following charts:

1. Birthweight

Less than 1,000 gm - 16%
1,001 to 1,500 gm - 20%
1,501 to 2,500 gm - 26%
More than 2,500 gm - 37%

2. Nature of the Problem

Medical - 84%
Surgical - 4.6%
Congenital Heart Defects - 6.3%
Expired prior to transport - 1.5%
Returned child to referring hospital - 2.6%

3. Location of Referral

Referred from Metro and Suburbs - 60.6%
Referred from outside Metro - 39.3%

At the time of writing, two decisions which will affect the operation of the transport team are being considered. The nature of the issues and the response of the Review Committee to these are set out below.

1. To Eliminate the Four Transport Assistant Positions

When the assistant is required, a relief person must usually be obtained to replace her on 7G. From September 1981 to September 1982 the assistants worked an amount of time on transport equal to one and one half full-time equivalent positions (FTE) and were involved in 23.4% of transports during that period. They fill in for vacation, overtime, illness and statutory holidays. During that same period an additional 10% of transports utilized physicians, respiratory technologists, the head nurse on transport, or a paramedic serving in the Ministry of Health Ambulance Helicopter. Thus, a grand total of 33.2%, or one third of the runs, utilized a non-transport team member as the second person.

The elimination of the transport assistant position will affect almost one quarter of the transports as these are now being carried out. What are the alternatives? Perhaps some saving of time would accrue from reduction of the overlap of four hours in the afternoon, as the day shift works 7:00 to 5:00 and the evening shift works 1:00 to 11:00. However, this is the busiest time in the team's day and additional overtime due to lengthy runs toward the end of the day shift would be more commonplace and tend to offset any potential saving. A call system whereby team members would be called from home would increase the response time very substantially, given that several nurses live some distance from the city centre, one as far as fifty miles away. Moreover, when not on a run the transport team members are busy on 7G performing special procedures, training staff and doing intramural transports of children to other locations of the Hospital. Another alternative is to cut back on the service, a suggestion which we do not think would be well received by the public, by the medical personnel making the referrals, or by the Neonatology personnel. It is not possible because of the nature of the service, the equipment required and the human factors involved to send only one person on a transport call.

Clearly the elimination of the transport assistant positions would eliminate the present "total coverage" system and create a situation of constant doubt in the minds of those making referrals as to the availability of the service when it was required.

2. <u>To Use the Transport Team for All Required Transports</u>

The neonatal transport program is an efficient and highly effective mechanism for bringing neonates to the Hospital. The nurses are not trained to handle situations of trauma nor other conditions which would normally lead to a request for transport in other areas. They are rather highly specialized neonatal nurses who, in our opinion, should continue to fulfill only that function.

A separate transport team program, perhaps on a call basis, given the irregular basis of the need, could be considered. It is anticipated that relatively small numbers of children will require such transport and it is conceivable that the paramedic program of the Ministry of Health could respond to this need.

Part IV

NEONATAL STATISTICS

The success of the efforts made by the medical staff and nursing in carrying out their assignments is reflected in the following charts provided to the Committee by the Chief of the Division:

MORTALITY <1500 g. COMPARISONS

Year	H.S.C.*	W.C.H.	Hamilton/Wentworth McMaster U.M.C.		
1962	>85%		Before ICU	58.7%	1964-1969
1967	58/115 = 51%				
1977	71/263 = 31.9%		After ICU	39.2%	1973-1977
1978	84/241 = 33.6%				
1979	79/268 = 29.5%	27/119 = 22.7%			
1980	82/262 = 31.3%	46/137 = 33.6%			
1981	76/301 = 25.0%	43/149 = 28.8%			
1981-82	64/328 = 20%				

* $\frac{\text{deaths}}{\text{admissions}} \times 100$

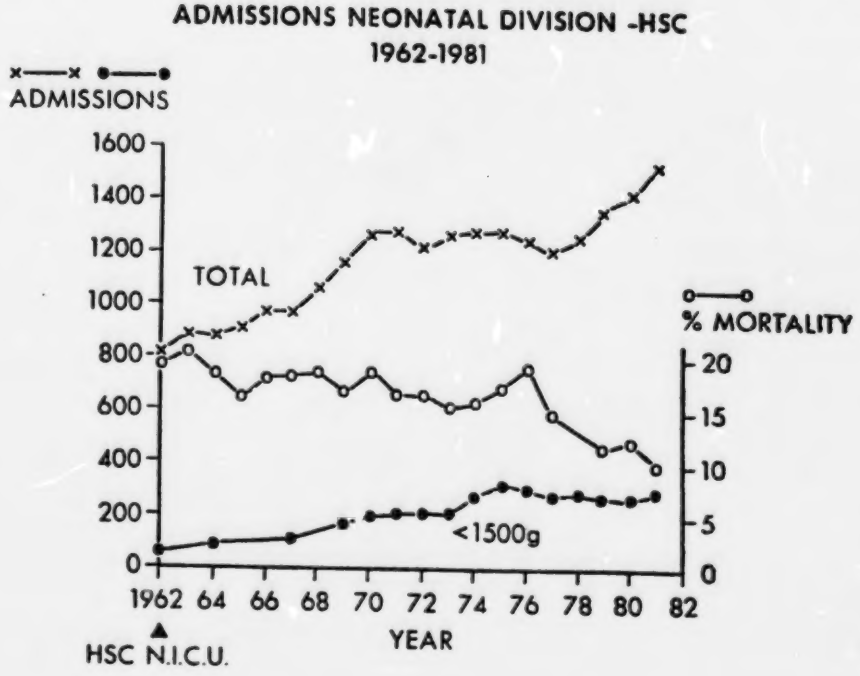
DIVISION OF PERINATAL MEDICINE

THE HOSPITAL FOR SICK CHILDREN

MORTALITY AT NICU FOR INFANTS WITH BIRTHWEIGHTS >1500 G.

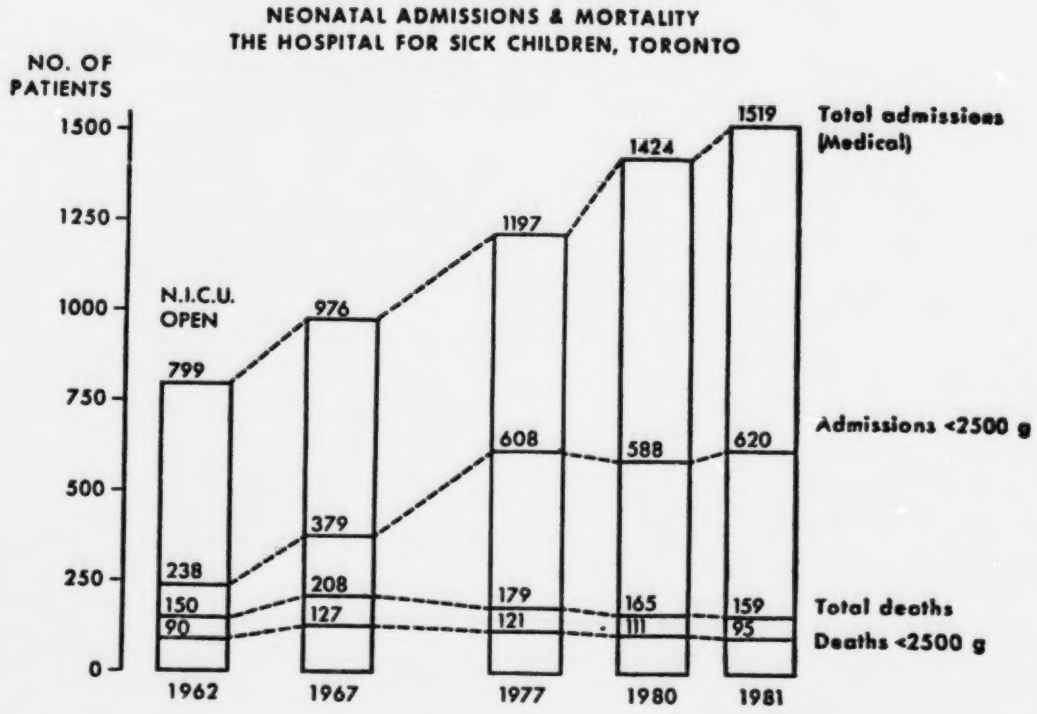
	Mortality
Before 1960 (NICU started in 1962)	85%
1975-1976	40%
1980	31%
1981	25%
1981-1982 (Academic year)	20%

FIGURE 1



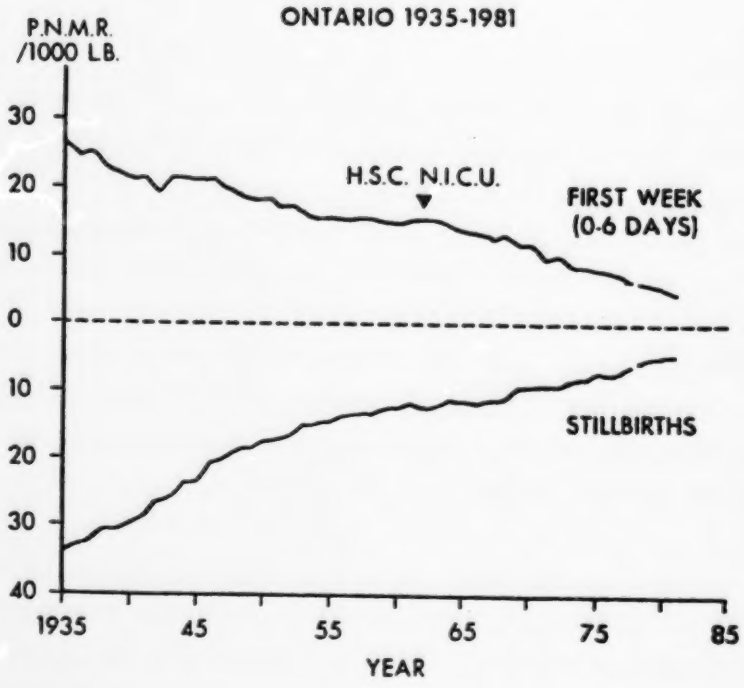
ADMISSIONS AND MORTALITY AT H.S.C. FROM 1962 TO 1981

FIGURE 2



NOTE THE INCREASING NUMBERS OF ADMISSIONS, BOTH TOTAL AND LOW BIRTH WEIGHT AND THE DECREASING MORTALITY FOLLOWING THE OPENING OF THE NEONATAL INTENSIVE CARE UNIT IN 1962.

FIGURE 3



STILLBIRTHS AND NEONATAL MORTALITY RATES IN ONTARIO FROM 1935 TO 1980. NOTE THE PLATEAU IN THE FIRST WEEK PROVINCIAL DEATHS PRIOR TO THE OPENING OF THE H.S.C. NICU.

COMMENT ON THE NEONATOLOGY DIVISION

The service provided by the Neonatal Division is truly quite remarkable, having in mind the environment in which they are carrying out their duties and the working conditions under which they function. It cannot be assumed, however, that the success of this unit will continue unless immediate priority is given to making needed improvements. In the absence of such, we do not think that the present quality of patient care can be maintained.

Although five senior staff positions have been approved, there is a vacancy of two. The fellows and specialty residents are non-Canadian and are likely to continue their practice outside the province. Few Canadians find neonatology attractive as a career because of the stressful nature of the work, the long hours, and the lack of financial recognition. Inadequate numbers of staff to manage patient care responsibilities do not permit sufficient time for academic, administrative and research activities. Paediatricians trained in this atmosphere are not encouraged to seek out neonatology as a career. If conditions are improved upon, it should be and can be one of the most rewarding specialties.

The Hospital for Sick Children is now in competition with the New Mount Sinai Hospital and Women's College Hospital for neonatologists. The practice in place at the Hospital is generally that of equality of pay for all sub-specialists. In order to fill the roster with required neonatologists, it is apparent that some added financial recognition should be given to the special burdens of this particular expertise.

A comparison with other like institutions indicates a need for at least seven or eight neonatologists for a unit of this size. Furthermore, in order to provide adequate services, the Hospital should strive to have a neonatologist in the Hospital 24 hours a day. In the absence of a certified neonatologist, an effort should be made to utilize other personnel who might be willing to work evenings.

The neonatologists in the Hospital adhere to the open door policy; they will not turn a patient aside. The new unit at the New Mount Sinai Hospital, when in full operation, is not expected to have much of an impact on the number of patients being admitted at the Hospital for Sick Children,

and there does not appear to be any immediate prospect for reduction in the work load. In the long term, a co-ordinated service is contemplated and, with expanded neonatal services outside Metropolitan Toronto, some small relief on the pressure may possibly be achieved. This appears to be a long way off and should not reduce the urgency of the required planning for the present and immediate future. It is our understanding that the Ministry of Health is concerned with the shortage of neonatologists, and any support from the Ministry directed to this issue is very much in need.

With the possible reduction in the amount of residency support in the future, immediate consideration should be given to the training of nurses to a level where they could assume the responsibility for certain of the tasks presently performed by junior and senior residents. The success of the transport team of nurses points to the clear possibility of nurses being able to fulfill added important functions.

Reference has been made to the importance of the transport team to the success of the neonatal unit. The removal of transport assistants from the team would, in our opinion, be a retrograde step and the expansion of the neonatal team to Hospital-wide service, we think, would reduce the efficiency of these very skilled nurses.

Reference has also been made to the facilities. The space provided for this service is clearly inadequate. It is recognized that there is a difficulty in assigning space in the present building, but we think a serious study is urgently required with a view to providing better facilities. When one notes that the average occupancy of ward 7G is frequently six to seven beds higher than space dictates, the need for better facilities is apparent.

Chapter XV

The Department of Pharmacy

Part I

INTRODUCTION

A modern and up-to-date efficient pharmacy is absolutely essential for the delivery of high quality care in a hospital. The Department of Pharmacy is responsible for the stocking of medications, the delivery of medications and the recording and monitoring of drug and other products as defined in a particular hospital formulary and procedural manual. The pharmacy program must be tightly integrated with the floor services in order to provide medications in response to orders received for patients and must participate in the surveillance program relating to their use.

Medication errors are a matter of serious concern in all hospitals in North America. In a recent text called Medication Errors: Causes and Prevention by Neil M. Davis and Michael R. Cohen, both of Temple University School of Pharmacy, Philadelphia, published in 1981, a careful study is set forth as to the experience in the United States.

In the study made by them as to the experience in several non-unit dose hospitals in the United States, they found error rates of 16.6%, 13%, 7.7%, 8.3%, 9.9%, 11.4%, 20.6% and 5.3%, with an average of 11.6%. In commenting on those figures, the authors went on to observe:

> Many hospital personnel are skeptical of the validity of these studies and minimize the clinical importance of the errors they reflect. What is the true error rate in hospitals? For the disbelievers let us select an arbitrary figure of 1%, a much lower figure than any reported by studies in non-unit dose hospitals. Such an error rate would mean 10,950 medication errors annually, 30 medication errors daily [based on a daily

census of 300 patients for 365 days receiving an average of 10 doses of medication a day]. Clearly, even with a low medication error figure, the number of errors is alarming.

Many of these errors have no clinical significance and do not adversely affect the patients or extend their hospital stay, although they do affect the patient's confidence in the quality of the health care system and its personnel. But some errors do affect the patient's health. In the pages that follow, medication errors which had serious, and sometimes fatal effects on patients, are cited. If health professionals and administrators treat errors lightly simply because no harm was done to the patient, a serious error that will cause injury or death will be inevitable.

An example of the nature of the medication errors detected and the type of errors is set out in the following chart of results obtained at a University of Florida teaching hospital:

Table 2-1. Frequency of Observed Medication Errors in Florida Study (By Error Type)

Type Error	Number of Errors Observed 572 doses administered	Percentage of Total Errors
Omission	35	37
Underdose	12	13
Overdose	7	8
Extra dose	9	10
Unordered drug	17	18
Wrong dose form	4	4
Wrong time (early or late by 30 minutes)	9	10
TOTAL	93	100%

There was no way for the Committee to accurately determine the actual experience relating to medication errors at the Hospital for Sick Children. Incident reports reflect, we think, only a small percentage of such errors. From our analysis there is no reason to believe that the percentage of medication errors at the Hospital for Sick Children is anywhere as high as what was reflected in the above referred to text, but there are still far too many medication errors for a hospital of the calibre of the Hospital for Sick Children.

In an internal report on medication errors prepared in June 1981 by the Department of Pharmacy at the Hospital, the following analysis appears:

ANALYSIS OF MEDICATION ERRORS

Medication errors which occurred in April, May and June of this year have been reviewed. All errors are included in Appendix VI of this report. It is impossible to determine the percentage of total errors that are reported. It is agreed generally that many errors are not detected because the person committing the error is not aware of it. The reporting routine at the hospital is not punitive but rather a documentation process so it is assumed that most if not all detected errors are reported. The number of reported errors is extremely small. A minimum of 5,000 doses are administered every day and in the three months reviewed an average of 18 errors were reported per month. This is an unrealistic number.

There is a high incidence of errors involving intravenous solutions, for example, Dextrose 5% in 0.2% saline ordered and Dextrose 5% in 0.9% saline given. One reason for this problem may be the unusually heavy requirement for nursing staff in the hospital to prepare and/or mix I.V. solutions because of the special needs of pediatric patients. This is properly a pharmacist's responsibility and should be managed by a pharmacist on the nursing unit.

There are several errors in which the wrong drug was given, for example, furosemide instead of hydralazine. This type of error is virtually eliminated with a unit-dose system and a duplicate copy of the physician's order provided to the pharmacist.

Several errors were made which involved miscalculation of dosages. Pediatric medication requires so much individualization of dose and calculation of volumes, etc. that pharmacist support of nursing staff is essential. Unit-dose packaging is helpful. The availability of the pharmacist to the nurse will help to prevent such errors.

There are several "clerical" type errors, that is, doses omitted, or given at the wrong time, or after being discontinued. New forms and updated procedures for documentation will decrease this type of error.

For our purposes, medication errors were most highly dramatized by what occurred in the neonatal ward 7F early in January 1982, which has been fully set forth in Chapter XIII. Racemic epinephrine was mistakenly administered to several patients instead of vitamin E, which was the prescribed drug. As was noted, the bottle for each drug was strikingly similar. There had been no other labelling of the drug. Although nurses are instructed to carefully read the label three times, it was apparent that that routine was not carried out.

Since digoxin was made a controlled drug in March 1981, there have been, as has been noted, instances of digoxin being administered to some patients for whom the drug had not been prescribed, although apparently without any harmful effects. In a reported incident it was disclosed in another case that valium had been administered to a patient rather than the prescribed drug lasix.

There have also been instances of borrowing medication from other wards and of pre-drawing medication into a labelled syringe well ahead of the time of administration. On at least one occasion, propanolol was borrowed from another ward, the dose drawn up in a syringe, labelled and the syringe was left in the refrigerator for later use. On another occasion, a syringe of propanolol was left taped to the end of a patient's bed.

Although few medication errors have clinical significance, there is an inherent danger that such errors would have a greater impact on the very young. Paediatric medication frequently requires individualization of dose and calculation of volume, each of which increases the risk of error.

Since about 1974 the Hospital for Sick Children has undergone one of the greatest expansions in services in its history. This was accomplished at a time of considerable financial constraint which necessitated monies being taken from, or not allocated to, certain services in order to support new programs approved by the Board. One area that appears to have suffered from this policy is pharmaceutical services.

Part II

THE DINEL AND SUMMERS REPORT

In July and August of 1980, the Hospital obtained an external review of pharmaceutical services by two outstanding hospital pharmacists, Brian Dinel and Jack L. Summers.

Dinel and Summers observed that the introduction of new clinical programs placed heavy demands on Pharmacy for new services without prior consultation with the Department. Therefore, the Department of Pharmacy was faced with the problem of responding immediately to the needs of these new programs without sufficient time for planning the reassignment of work load, space and equipment. An example of the increased burden on Pharmacy was the establishment of the Division of Haematology/Oncology.

In their Report, Dinel and Summers stated:

> The "medication system" is the complete system of drug control designed to ensure patient safety. In contemporary pharmacy practice it includes a review of the physician's original order before filling drug orders, the process of supplying drugs to the nursing unit, the control by pharmacy of all drugs on the floors, the creation and maintenance of drug profiles, ensuring the completeness of patient drug histories, and of monitoring drug therapy.

They concluded that the medication system in use at the Hospital at that time fell considerably short of those requirements. The medication system in use delivered the drugs to the nursing unit and stopped at that point. They commented that that system was restricted to a product delivery system. They observed the following deficiencies: drug orders were filled on the receipt of a transcription from the physician's original order, nurses were required to complete requisitions for ward stocks, drug administration schedules were based on the antiquated medication ticket system, and the narcotic control system involved excessive paper handling.

Dinel and Summers concluded:

> It is recognized that even with unlimited financial and physical resources it would be neither possible nor desirable to implement all of the recommendations [in our report] at once. But resources are not limitless, and both prudence and the limitation of resources require that recommended changes be introduced over a period of years.
>
> Effective changes in the quality and nature of pharmacy services will require a prolonged period of intense and continuing support by senior administrative offices of the hospital. Such change will also require careful step-by-step monitoring and evaluation at the same level. The opportunities for an exciting pharmacy service of unquestioned excellence are limitless. How far The Hospital for Sick Children goes toward achieving this goal depends greatly on the leadership and desire of senior hospital management.

SUMMARY OF DINEL AND SUMMERS RECOMMENDATIONS AND ACTION TO DATE

A. Management

Recommendation 1.

That an effective pharmacy organizational structure be established and monitored which would plan and implement needed change to provide a contemporary pharmacy service.

Action Taken:

The present director of the Department of Pharmacy assumed her position in March 1981. She is a highly qualified pharmacist with extensive experience in pharmacy management. She has a clear concept of what constitutes modern pharmacy practice in hospitals and has established a planned program to achieve this objective.

The organization chart was revised in March 1982 and lines of authority and responsibility are now clearly delineated. There are clear job descriptions with an upgrading of qualifications of staff, upgraded policies and a revised drug formulary.

The drug formulary now consists of 900 drugs, which seems to be a rather large and unmanageable number.

Policies and procedures have been rewritten and are under continuous revision. These policies and procedures direct themselves to:

a) Supervision, packaging, labelling, distribution of drugs to patients and other hospital departments.

b) Review of medication orders for accuracy.

c) Maintenance of drug profiles and surveys of drug reactions.

d) Monitoring of therapy and adverse drug reaction reporting.

e) Recall and handling of patient drugs and ward supplies and disposal of discontinued and out of date drugs.

f) Doctors order forms.

g) Stock requisition forms.

h) Reporting of medication errors and corrective action.

i) Automatic stop orders for drugs.

j) Emergency drug boxes in clinical areas.

The pharmacy procedure manual is presently being revised and is incomplete. Every effort should be made to complete this manual at the earliest possible date.

Recommendation 2.

That the impact of new or expanded clinical/hospital programs on the Pharmacy Department should be considered well in advance of implementation of such programs.

Action Taken:

Programs and planning are outlined in a specific written form.

Recommendation 3.

That a Pharmacy-Nursing Committee be established to effect on-going discussion and communication regarding all aspects of the medication system including the monitoring of medication errors.

Action Taken:

A Nursing-Pharmacy program has been implemented to disseminate information and to report and follow up medication errors. This is a new committee recently established to promote a better understanding of pharmaceuticals by nurses and better communication in respect to medication administration procedures between Pharmacy and Nursing. The Review Committee commends the Hospital on instituting this committee.

Recommendation 4.

That administration continue to assign a high priority to the needs of the Pharmacy in terms of professional and financial support.

Action Taken:

Pharmacy is receiving good support from Administration. The Review Committee hopes that this understanding by Administration of the importance of support services continues.

B. Medication System

Recommendation 5.

That an improved drug distribution system be established and implemented which is based on the principle of drug use control to ensure patient safety.

Action Taken:

Pharmacists have been assigned to the clinical units throughout the Hospital. Advice is readily available with respect to drugs, and orders are now monitored for dosage and incompatibilities.

Recommendation 6.

That the hours of service be immediately restored to the previous coverage, i.e. 0830-2200 hours and that this coverage be expanded to include Saturdays and Sundays.

Action Taken:

Hours of service have been increased to 16 hours a day and will go to 24 hours a day in Central Pharmacy in January 1983. Coverage on Saturdays, Sundays and holidays remains at 8:00 a.m. to 5:00 p.m.

Recommendation 7.

That a more effective and responsible system for the provision of drugs during off-hour coverage be established; that access to the Pharmacy during off-hours must be restricted to Pharmacy staff.

Action Taken:

Access to the Pharmacy is still not restricted during off hours.

Recommendation 8.

That a Pharmacy-based IV admixture program be established to significantly reduce the potential for medication errors inherent in the present practices.

Action Taken:

An admixture system has not yet been implemented.

Recommendation 9.

That a multi-disciplinary team be established to plan, implement and evaluate the new medication system proposed for the fourth floor.

Action Taken:

The Nursing-Pharmacy Committee is reviewing medication systems for all units including the fourth floor.

C. Ambulatory Pharmacy Services

Recommendation 10.

That a modern, compassionate ambulatory pharmacy service be established to support the expanding needs of physicians and patients.

Action Taken:

The ambulatory pharmacy services have been much improved by the assignment of this function to a pharmacist.

D. Physical Resources

Recommendation 11.

That additional floor space be allocated to the Pharmacy to meet recognized and accepted professional standards.

Recommendation 12.

That the use of automated systems should be investigated and implemented wherever possible to increase the efficiency and productivity of existing manpower resources.

Recommendation 13.

That immediate steps should be taken to plan and design a contemporary pharmacy services which is compatible with the present and future needs and roles of the hospital.

Action Taken:

Increased space has been provided to Pharmacy. New plans for Pharmacy are being devised which will give even more space to the pharmacy.

E. Staffing

Recommendation 14.

That adequate staffing be provided to meet the needs of new or expanded programs.

Recommendation 15.

That recognition be given to the need to improve the image of the Pharmacy and morale of the Pharmacy staff by providing employee benefits to attract highly qualified professionals.

Action Taken:

Qualifications and number of staff have both increased. Since March 1981 the pharmacy staff increased from 22 to 33. The morale of the staff is much improved with clear direction from the new Director of Pharmacy.

F. Research

Recommendation 16.

That Pharmacy support of clinical research programs be recognized as an important service; however, such a service may require a commitment of additional resources.

Recommendation 17.

That a research pharmacist be employed to coordinate and manage Pharmacy support for clinical research programs; such a position should be totally funded by the Research Institute.

G. Education

Recommendation 18.

That a formal educational program be established which would include new staff orientation and staff preparation for new programs.

Recommendation 19.

That Pharmacy has a responsibility to ensure that educational programs are established for in-patients and out-patients.

Recommendation 20.

That plans should be made to implement a hospital pharmacy residency program with specialty training in pediatric Pharmacy practice.

Recommendation 21.

That planning for a clinical pharmacy teaching program should be jointly undertaken by the hospital and the Faculty of Pharmacy.

These areas are not directly within the scope of the terms of reference of the Review Committee and were not examined.

H. Clinical Pharmacy

Recommendation 22.

That a clinical pharmacy program is an integral component of hospital pharmacy practice and steps should be taken to plan and implement such a program; this program should be coordinated with the Division of Clinical Pharmacology.

Action Taken:

There is a pharmacist on the floor in the following wards: Cardiology, Oncology/Haematology and the Intensive Care Unit. The Pharmacy out-patients service has been improved and approval has been given for a pharmacist in the neonatal ward. The long-term goal is to have a clinical pharmacist on all nursing units.

I. Drug Information

No recommendation was made.

J. Pharmacy and Therapeutics Committee

No recommendation was made.

Part III

A UNIT DOSE DRUG DISTRIBUTION SYSTEM

The Review Committee examined alternative drug distribution systems in an effort to identify a system which would best reduce medication errors.

Drug distribution systems have been the subject of considerable literature, particularly between the years 1960 and 1975. In an article by Dr. B. R. Schnell in The Canadian Journal of Hospital Pharmacy, May-June 1978, entitled "Drug Distribution in Canadian Hospitals", the author made the following observations:

> While there are many different drug distribution systems, there are really only two main types, (a) Floor stock-prescription order, and (b) unit-dose. In fact, according to one author, 'Every hospital in the world practices 'unit-dose' i.e. all medications are reduced to an individual dose before they are

> administered to a patient. Thus, the consideration is not one of adopting the concept, but of deciding at what point it will be implemented in the chain of manufacturer to patient. The advantage of implementation at the point where the greatest efficiency and control can be realized--at the level of the manufacturer, or, next best, at the hospital pharmacy level--are clear.'
>
> While the unit-dose system has many advantages, most of the so-called benefits of the system can be achieved in more traditional systems. As Jack Summers indicated in an editorial at the time of the release of the C.S.H.P. Unit-Dose Study Report: 'One message that comes through loud and clear is that the unit-dose system is just that: a system. It is not a panacea for all of the problems associated with drug distribution. It is a good system, but, like any system, it requires careful planning, adequate staff training, lots of patience, and plain old-fashioned hard work to make it function smoothly. It also requires an intelligent appreciation of the total drug distribution cycle and the application of common sense. Systems don't make mistakes; people do! And as long as people are involved, there will be mistakes no matter what system is used.'

However, one of the most effective means of reducing the number of medication errors has been the introduction of a unit dose drug distribution system. Published medication error studies made in the United States show approximately 80% fewer medication errors in hospitals using a unit dose dispensing system compared to hospitals using the traditional drug distribution system.

This system provides for greater drug control, increased accountability for doses of drugs distributed, freeing of nursing time and less wastage. Although some urge that there is also economy by the switch to the unit dose system, it appears to the Committee that it is indeed a much more expensive system. It requires additional pharmacists and longer hours for the Pharmacy Department. However, medication errors also result in great expense, particularly where the error has clinical effects and may result in loss of reputation and lack of confidence in the Hospital.

The use of the unit dose system is ever increasing in the United States and of more recent date in Canada.

In the text, Medication Errors, by Davis and Cohen, previously referred to, the general characteristics of a unit dose system are described as follows:

Though the unit dose system may differ in form depending on the specific needs, resources and characteristics of each institution, four elements are common to all:

1. medications are contained in, and administered from, single-unit or unit dose packages;

2. medications are dispensed in ready-to-administer form, to the extent possible;

3. for most medications, not more than a 24-hour supply of doses is provided or available at the patient care area at any time, and a patient medication profile is concurrently maintained in the pharmacy for each patient.

In a unit dose system, floor stocks of drugs are minimized and limited to drugs for emergency use, and routinely used "safe" items such as mouthwash, antiseptic solutions and other nursing necessities. The more comprehensive the system, the less need for floor stock.

COMMENT ON PHARMACY

Prior to March 1981, the pharmaceutical services at the Hospital for Sick Children were not up to the standards required for a hospital of its size and complexity. The Review Committee believes that the responsibility for this situation must be shared by the Board, the Administration and the medical personnel. Specifically, they ignored or failed to understand the impact of expanded clinical services on this Department and failed to support the development of modern hospital pharmaceutical services at the Hospital for Sick Children. The Hospital is commended for its action of obtaining the external review of pharmaceutical services by Dinel and Summers, two outstanding hospital pharmacists, in July and August 1980. From its own review of pharmaceutical services, the Review Committee supports the findings and conclusions contained in the report by Dinel and Summers and concurs with the recommendations made.

Since March 1981, very major steps have been taken to bring modern pharmaceutical practices into effect in the Hospital and these are noted with approval by the Review Committee.

The impact of the expansion of clinical services on support services such as Pharmacy must be realized and priorities assigned to ensure their appropriate and parallel development.

The Review Committee further supports the policy of the Hospital to institute measures which might provide protection against inadvertent misuse of drugs and to reduce the stocks of drugs available on individual nursing units.

Because of the greater potential for medication errors in a paediatric hospital and the greater potential for harm by reason of such errors, a unit dose distribution system appears to us to be particularly appropriate for the Hospital for Sick Children, and its introduction should go a long way in restoring confidence in the Hospital, which has suffered by reason of the medication errors which have occurred.

Under the new Director of Pharmacy, the Hospital is in the process of introducing such a system, but every effort should be made to speed up its full implementation.

Chapter XVI

The Public Response

The Hospital for Sick Children advocates a policy of parental involvement in patient care. It is believed that parents should participate and be involved in all aspects of their child's care while hospitalized. This includes the normal daily chores of bathing, feeding and entertaining, as well as limited medical care such as the administration of oral medication.

In theory, this practice has several valuable functions. Having a parent close by helps the child adapt to the hospital environment and comforts the child. The parents are kept informed by virtue of their presence and they are aware of what is going on at all times. The burden on the hospital staff is alleviated somewhat because the parents are there.

Although the policy is well intended, it does not always work out as well in reality as it does in theory. Parents are often emotionally overwrought at the thought of their child being ill and therefore may over-react to minor crises. Nurses who have not adjusted to the parents' non-traditional role may lead parents, consciously or unconsciously, to believe that they are in the way and a nuisance. The staff may misunderstand the policy and may believe that, because the parents are there, the nurses are relieved of some of their responsibilities and can leave the child to the parents' care. This leads parents to react in an adverse manner, which aggravates the situation and causes tension. Parental involvement is an admirable goal which may require time, effort and co-operation to achieve its objective.

It was felt that because of their unique position as both participant and observer at the Hospital for Sick Children the parents' views and opinions would contribute to the Review. Therefore, newspaper advertisements were placed and radio broadcasts were made seeking submissions from any members of the public who felt that they could be of assistance to the Review Committee.

We received over 70 submissions from the public. A number of the submissions were followed up with personal interviews. In addition to these, we contacted specific individuals whose names were brought to our attention, bringing the total number of public submissions to approximately 85.

Several of the letters received were supportive of the Hospital. In general, they commend the staff as being extremely compassionate, understanding and of a high quality of professionalism. The staff was found to be very supportive and accessible. Several parents commented that they were treated with respect and were consulted and informed as to what was occurring every step of the way.

There were more negative submissions than positive ones. This may be accounted for by the nature of the wording of our appeal to the public. The advertisements may have implied that we were seeking people with complaints as opposed to people with comments in general. In addition, parents who are angry or upset because they feel that their child was not cured are more likely to voice their concerns than those parents who have no complaints.

Taking all this into account, however, there are some common themes that occur throughout the submissions.

1. A great number of the parents suggested that the nurses are extremely overworked and that, as a result, there is inadequate supervision. The letters reported incidents where infants were left alone for long periods of time. However, all these parents felt that it was not that the nurses did not care, but that they just had so much to do that it was impossible for them to give more attention to their patients.

2. It was felt that often the nurses left the baby to the care of the mother and in a way abdicated some of their responsibilities to the parent. As we mentioned previously, the Hospital has a policy of parental involvement, but this does not appear to have always been adequately communicated to the parents. Parents indicated that they felt that, on occasion, the nurses thought them to be a nuisance and in the way. Thus, there appears to be a need for additional explanation of parental involvement.

3. There have been some complaints by parents of inaccurate charting with respect to test results and non-medical comments. In one case a mother was asked to fill out a questionnaire regarding her child's personal habits as he was being discharged.

4. The question of security was raised repeatedly. Several submissions pointed out that parents could freely walk about the hospital without a second glance even when carrying their child in their arms.

5. It was felt that student nurses are often left unsupervised. Along the same vein, it was felt that the nurses' orientation is inadequate and should be more intense and specific as to the needs of the service that they will be working on.

6. Parents who complained directly to the Hospital felt that they were ignored and their complaints put on a back shelf. They found the Administration unresponsive and unco-operative and did not know whom to turn to for answers to their questions.

7. There were very few complaints with respect to the professionalism of the care provided at the Hospital. Two such complaints related to patient Steven Yuz and patient Rafiki Cruise, whose cases have been previously discussed in this Report. One person complained of a "fascia lata sling surgical procedure" performed on her as a very little girl in January 1956. She claimed that the surgical procedure used was inappropriate and other procedures should have been undertaken. The nature of the surgery performed was, in the view of the Committee, a perfectly acceptable medical procedure at the time of surgery, and although other techniques apparently are in use now, we do not think that the complaint, although sincerely made, was justified. Other parents whose children had undergone surgery complained that the surgeons had not seen their child before surgery and were not familiar enough with the particular patient. If this has occurred in the past, our investigation disclosed that this has not been the practice, nor is it the practice at the Hospital.

COMMENT

On the whole, the parents who contacted the Review Committee, even those who had expressed some dissatisfaction, felt that the Hospital for Sick Children is a valuable and unique Canadian institution whose continued existence is vitally important to the community. As has been noted, there have been few complaints with respect to the professionalism of the care given to patients. The major complaint, which we think had validity, was with respect to the lack of communication, which subject matter is dealt with in the next succeeding chapter of this Report. The other matters raised in the submissions received from the public are also the subject matter of comment in other chapters of this Report.

Chapter XVII

Communications

In any institution of the size and complexity of the Hospital for Sick Children, the flow of information, or communications, becomes an area of importance and concern. Information must move unencumbered and uninhibited, vertically and horizontally. This is essential to the effective operation of any institution.

Throughout this Report multiple reference has been made to the problem of communications, both within the Hospital and with the public. It is not surprising that in a hospital as large and complex as the Hospital for Sick Children there should exist a significant communication problem, or a perceived problem in communication, between and within departments and divisions, whether medical or administrative, between the Board, Administration, medical staff, nursing and support services, and between the Hospital and parents. To a degree the problem has been amplified by the major expansion in clinical services that has taken place over the past few years, the significant numbers of new appointments to medical and administrative staffs, the high turnover rates of employees experienced by all hospitals in recent times, and organizational change at the Hospital for Sick Children. Effective communication is always difficult in a large complex organization and in particular in institutions such as this Hospital where emotional involvement is so high and the population to be communicated with is large, fluctuating and varied.

It is the opinion of the Review Committee that effective communication is a very major problem in the Hospital for Sick Children.

To be effective, communication must be clear, comprehensive and timely. To a very large degree, the lack of communication or the perceived lack of communication can be attributed to a philosophy that appears to prevail throughout many areas of the Hospital for Sick Children—a philosophy that sees the institution as comprised of multiple independent entities. The

Review Committee is concerned with the apparent lack of understanding that prevails within the Hospital with respect to how the Hospital functions and how the various components are interrelated with each other to comprise one health institution. We are surprised as to the lack of knowledge by many with respect to the functions and jurisdictions of the Board, the administration, the medical and nursing staffs, and the support services. We are particularly concerned about the protective attitude that prevails in some areas and the fear of reprisals that was voiced by some if opinions were expressed openly and frankly.

This lack of understanding and of open communication lends itself to a feeling that "we are not consulted," "our authority is usurped," "everything is imposed on us," "we don't count," etc. It undermines morale and makes the co-ordination, co-operation, understanding and participation so necessary to hospital operation difficult to achieve.

At the ward level the inability of some parents to identify the responsible physician led to parents seeking information from nurses, residents, students and whomever they could corner. The result, as would be expected, was a confusion of information, often contradictory in nature, which made some parents suspect that "someone was not telling the whole truth." The anxiety level of already concerned parents was further raised. This was the single major complaint expressed by parents to the Committee. It must, however, be emphasized that it would be quite wrong to infer that this problem existed in all areas of the Hospital or between all parents and all physicians. Many parents volunteered to the Committee that their contact with the concerned and dedicated medical and nursing staffs of the Hospital was the most satisfying experience of all.

As an outcome of the recent incidents which occurred in the Cardiology Division of the Hospital, the calibre of communications with the public came into focus. The press, police, the Coroner and parents of infants involved have been publicly critical of the manner in which communications has been conducted with the Hospital. There have been charges of "cover-up," "withholding information," being "unco-operative," etc. What may have been overlooked are the circumstances in which the Hospital found itself at that time. The police had their own investigators and experts and, quite understandably, the Hospital was not privy to the information being obtained by the police. There are also established limitations with

respect to making information public by reason of the ongoing police investigation. The exhumation of the bodies of deceased patients was not within the jurisdiction of the Hospital, and in many instances its first information in this respect came through the public press. The Hospital was unaware of the introduction during the preliminary hearing of 16 allegedly similar fact cases until after that information had been submitted by Crown Counsel to the Court. Thus, the Hospital, on occasion, did not have the information which was being sought from it and was not able to respond immediately to parents' requests for such information. It also had to respect the confidentiality imposed upon it by law relating to medical records.

The Hospital was therefore confronted with a situation with which it had no prior experience. Whatever the shortcomings may have been with respect to the providing of information, we do not think that there was any deliberate attempt by the Hospital to improperly withhold information or to "cover up."

In response to the Review Committee's inquiry as to the procedures in place for communication with parents, the Hospital in its brief responded as follows:

> PARENT COMMUNICATION
>
> The patient's responsible physician and the medical and nursing staff on the ward serve as the primary source of information and communication for parents. All staff members who have opportunities to communicate with parents are encouraged to act as information sources.
>
> In addition, there are separate programs provided to assist parents, including the Parent Information Service, Parent's Personal Service, Parent Questionnaire Program, Parent Representative Program and a new Parent Liaison Committee which was formally initiated in 1982.
>
> The Director of Public Information had been investigating comments and complaints received by the Executive Director for several years prior to being designated as the Parent Representative. A separate telephone line was installed where parents could report their concerns and complaints directly to the Parent Representative.
>
> Parental concerns are investigated thoroughly, reported directly to the Executive Director and improvements are made where appropriate. Written replies signed by the Executive Director

are sent to all parents who had submitted their comments in writing and to most submitting verbal comments whenever names and addresses are available.

Parents are given an information card on the Parent Representative Program at the time of admission and signs advising of the direct telephone line are posted in elevator lobbies and other public areas.

COMMENT

Notwithstanding this elaborate procedure for communicating with parents, there continues to be dissatisfaction among parents of patients in the Hospital with respect to the inability to obtain prompt and accurate information with respect to their children. To give effect to this concern, which is still quite prevalent, we think the Board should give consideration to the appointment of an ombudsman to improve the parent/hospital encounter.

There are other procedures available which would assist the Hospital in meeting this problem of communications, many of which have already been referred to. A medical presence within the Administration would, we think, open up the lines of communication between the medical staff and Administration. Meetings of the general medical staff could be increased from one a year to four a year, with one of these meetings being a joint meeting between the medical staff and the Board of Trustees to provide for an open forum of contact. The involvement of more members of the general medical staff in the committee work of the Hospital, and meetings of medical departments and divisions on a regular basis, would provide a greater opportunity and an atmosphere for participation. A monthly letter from the Executive Director to all staff could be an effective communications tool.

One of the functions of the Service, Education and Research Committee is to ensure that there be provided and maintained a high degree of communication between the Medical and Research Staff and the Board, the staff and other agencies. We think that a higher priority to that particular function should be undertaken by that Committee.

Chapter XVIII

A Patient Care Safety System

What is needed in every hospital is a carefully planned and formalized patient care safety system. Safety is defined as "freedom from danger or risks." It is unrealistic to think that even the most sophisticated patient care safety system would achieve safety in such absolute terms, but that should be the goal. However, such a system, if rigidly adhered to, could not help but have the effect of minimizing the likelihood of error in the future.

Unfortunately, mistakes are inevitable in any health care institution. In some instances, a mistake may result in death. Fortunately, these instances are very few, but they are all the more tragic if nothing is learned from them. Errors are not necessarily the result of negligence. However, analysis of inadvertent mistakes and accidents may disclose practices and procedures which, although acceptable at one time, should be changed and improved.

There are sometimes cases where a patient has been acutely ill or dies where the cause of such ailment or death is not readily diagnosed. Yet every effort must be made in such a case to determine the cause of the ailment or of the death to be completely satisfied that neither was the result of an error. An error may have occurred in surgery, in the Intensive Care Unit or in a ward. It may have been the result of a diagnostic error or a nursing error. It may have been a pharmaceutical error or that of a pharmacologist within the Hospital. It may have resulted from an oversight on the part of the drug manufacturer, or the failure of or lack of equipment.

The greater the skill and dedication of the staff, the less likelihood there is of error. The Hospital for Sick Children has succeeded in attracting to it such a staff. With its multi-disciplines there is in place in one institution talent which, if properly utilized, would permit

the most highly efficient and analytical patient care safety system. What is lacking is the failure to fully utilize the breadth of talent in the Hospital for patient care safety procedures.

Although there is no single set formula for such a system, there are, we think procedures available which would go a long way in improving the present patient care safety system in this Hospital.

A patient care safety system should include the following:

(1) Statistical Surveillance

What is needed is a highly sophisticated statistical surveillance of all deaths in the Hospital. Increased numbers of deaths in themselves may not prove to be significant. All other parameters must be included to ascertain whether the numbers disclose a significant trend or something untoward. The information amassed should be forwarded to the Risk Management Committee, which should receive every month a statistical analysis of the deaths occurring in the previous month interpreted in the perspective of previous deaths. In this computer age there should be no difficulty in developing the software which would make such an analysis meaningful.

(2) The Role of the Pathologist

The pathologist should play a key role in the patient care safety system. The Department of Pathology functions as an independent group which can be of great assistance in the monitoring of medical and surgical care. Under the leadership of the present Chief of Pathology, the Department has commenced a statistical review of deaths in certain areas of the Hospital. This perforce is confined to an analysis of only those cases which come to autopsy.

As has been noted, in August 1982, as a result of what appeared to the Pathology Department to be an increased number of deaths of patients with cardiac ailments, a broad Mortality Review Committee was convened by the Chief of Paediatrics. When all other factors were considered, the Mortality Review Committee was satisfied that, notwithstanding the increased number of deaths, they were all readily explainable without

anything untoward having occurred in any of them. A similar study was made with respect to what appeared to be an increased number of such deaths in September, with similar findings.

The Department of Pathology should, in our opinion, analyze all autopsy deaths in the Hospital and submit a monthly report on them, with its own analysis, to the Risk Management Committee.

(3) Mortality Reviews

As has been noted, mortality reviews have been conducted on a daily basis within divisions or departments, particularly during the daily rounds by physicians and surgeons with residents and fellows. The manner in which the mortality reviews were conducted within the Hospital with reference to the deaths of patients in the cardiac wards between July 1980 and March 1981 disclosed, in our opinion, weaknesses in the then procedure, all of which has been fully discussed in Chapter X.

The principal weakness disclosed was the absence of interdisciplinary representation on the Mortality Review Committee and the failure to report on its activities promptly to medical committees, Administration and the Board. The absence of a medical presence within Administration was also highlighted.

Since March 1981, efforts have been made within the Hospital under the direction of the Chief of Paediatrics to improve the mortality review procedure and with some success. The response to the medication errors in neonatal ward 7F in 1982, referred to in Chapter XIII, is a good example of such improvement, as were the committees struck to review the deaths of patients with cardiac ailments in August and September 1982.

All deaths are now the subject of review by committees; a new form has been introduced that documents that the review has taken place, who was present, and whether medical care was appropriate or not, and whether the death was expected or not, as well as other comments. The implementation of signed committee reviews of all Hospital deaths is, we think, a major step in achieving a high level of surveillance.

However, there still does not appear to be a formalized Mortality Review Committee structure with broad interdisciplinary representation for use throughout the Hospital. Such a Mortality Review Committee should not be confined to those who had the responsibility for the care of the patient. It should also include representation from other departments or divisions of the Hospital who were not involved in the care of the patient. In addition, it should, we think, always include a pathologist, a clinical pharmacologist and an epidemiologist. The procedures adopted by epidemiologists so successfully in the area of infectious disease could well be adapted to analyzing other problem areas within the Hospital which may indicate an unusual trend.

Such a formalized Mortality Review Committee should be convened on a monthly basis. Their findings should also be fed into the statistical data bank to form part of the statistical surveillance and should be transmitted to the Risk Management Committee.

This may prove to be time-consuming and, in most cases, unnecessary, but the time spent will have proven to be worthwhile if on only one occasion facts are ascertained which would not have been otherwise forthcoming and, as a result, an untoward incident prevented. It also has the advantage of providing a public assurance that all deaths are carefully inquired into.

(4) Morbidity Reviews

It is also important to document and audit major complications, as well as minor complications which occur with unusual frequency. These should be reviewed by a formalized morbidity review system. Again, such information should form part of the statistical surveillance system and be fed into the data bank within such a system.

A very efficient surveillance program is presently in place within the Hospital relating to infectious disease. The procedures adopted in that program could be readily adapted to complications which arise within all service areas in the Hospital.

(5) Incident Reporting

There is presently an incident reporting system in place in the Hospital. There is a natural reticence for anyone to report on his or her own error or that of a colleague. However, everyone in the Hospital must be encouraged to do so. If the incident report relates to a colleague, the confidentiality of the source of the information should be assured. If the incident relates to the person reporting it, it should be made clear that other than in the case of gross negligence, the report will not be used against the person reporting in any disciplinary proceedings. The object of the exercise is to get all available information to be fed into a patient care safety system. Obtaining such information is far more important, in our opinion, than the use that may be made of it in disciplinary proceedings.

(6) The Risk Management Committee

An effective patient care safety system requires, in our opinion, one agency responsible for its effectiveness. The Risk Management Committee is presently an interdisciplinary body including representation from Administration. Its function should not be limited to dealing with matters which have already occurred. It should, we think, form the senior role in monitoring and supervising the patient care safety system. It should receive on a monthly basis the information amassed by statistical surveillance, by the pathologist, and by the Mortality and Morbidity Review Committees, as well as receiving, as it presently does, all incident reports. Its function then would be to analyze all such information and to put in motion any steps necessary to take corrective action.

(7) Security

Our experience disclosed that one could wander throughout the Hospital without being required to produce any identification except for entrance to the cafeteria. Although this does not appear to be satisfactory, it is difficult to determine what increased security measures can be practically made. With the program of parental involvement in the care of patients, there appears to be an unusually large number of visitors and at times resulting confusion. In addition there are several entrances to the Hospital which are unlocked and unguarded. There are many children's

hospitals in the United States where there are liberal visiting policies as well as security measures in place which identify all staff and visitors. The Review Committee is of the opinion that some additional security measures are necessary and that these need not be incompatible with the Hospital's liberal visiting policy.

(8) Report to the Coroners

One of the most important adjuncts to a patient care safety system is strict compliance with the Coroners Act. This is necessary from the point of view of public confidence as well as the assistance that may be rendered in those cases where the coroner deems it appropriate to conduct an inquest. As was noted earlier, in cases of hospital deaths, it is often a matter of judgment as to which cases are required to be reported. It would appear to be desirable that all cases should be reported to the coroner where the cause of death is in doubt, and where the cause of death cannot be accurately determined at autopsy, even though there is nothing to suggest that there has been anything untoward about the death. To render the system more efficient, it would be advisable, we think, if the responsibility for reporting all such deaths be assigned to the Chief Pathologist, and be directed to a single designated coroner's office. For future reference a record of the cases reported, including the name of the patient, date of death, name of the coroner notified and the time and date of notification, should be maintained.

COMMENT

For the reasons expressed earlier in this Report, in our opinion the patient care safety system presently in place is inadequate. There have already been many changes made to that system which can be and need to be improved upon. We think that if changes are made along the lines suggested above, with the expertise available, this Hospital can establish a patient care safety system which is the equal of, if not better than, any such system in any other like institution.

Chapter XIX

Recommendations

We have endeavoured in the various comments, which we have made throughout this Report, to set forth the reasons for the recommendations which now follow:

THE MANAGEMENT OF THE HOSPITAL

The Board of Trustees

1. The Hospital should continue to seek to balance the legal, banking and investment background of the present Board of Trustees with persons representing other experiences when future appointments are made.

2. The By-Laws of the Hospital should be amended to limit the term of office of trustees to a reasonable period of time.

3. Consideration should be given to reducing the number of Board members with a view to encouraging attendance at Board meetings and affording time for individual input and discussion.

4. The Board should assure itself that it is receiving a balanced opinion on presentations made to it.

5. The Board should ensure that the functions and responsibilities assigned to itself, to the Administration and to the Medical Staff are clearly defined and are incorporated into practice in the Hospital.

6. The plan for the future should aim for the provision of only such services for which this Hospital has unique capabilities. The Hospital should not undertake the responsibility of being the guardian of the health of all children in the Province.

The Administration

7. The establishment of a Management or an Executive Committee comprising the Executive Director, the Administrator, the Associate Administrator (Nursing), the Chairman of the Medical Advisory Committee and the President of the Medical Staff to serve in an advisory capacity to the Executive Director.

8. The chiefs of the clinical departments and the chiefs of the diagnostic services should report to the same level within Administration.

9. The establishment of a position for a Medical Administrative Officer to co-ordinate the clinical activities of the Medical Staff and to advise the Administration on medical and patient care matters. This individual should also sit on the Management Committee referred to in Recommendation 7.

10. A program of continuing management education within and outside the Hospital for department chiefs and division heads.

11. The consolidation of many existing departments for the purpose of improving communications and effective management.

12. The involvement of department chiefs in the decision-making process.

13. The involvement of the medical and nursing staff as much as possible in the decisions affecting the present and future plans of the Hospital.

14. The authority and responsibility of the Board Chairman, the Executive Director and the Administrator should be clearly defined with the view that the Executive Director be the Chief Executive Officer.

THE ORGANIZATIONAL STRUCTURE OF THE MEDICAL STAFF

15. The amendment of the Hospital By-Laws to provide for a more lengthy tenure of office for elected officers of the Medical Staff and to permit of a wider choice in the selection of those eligible to be elected.

16. The representation on the Medical Advisory Committee should be broadened to include representatives of the Medical Staff other than chiefs.

17. The Medical Administrative Officer should be accountable to the Board and to the Executive Director for total medical staff performance.

18. The Medical Advisory Committee should review its terms of reference and its agenda to ensure that it is fulfilling the responsibilities assigned to it by the Board and by the Public Hospitals Act.

19. The present committee structure should be reconsidered with a view to eliminating overlapping functions and consolidating like functions.

20. The membership of the Risk Management Committee should be more interdisciplinary with a broader representation of staff physicians and nurses.

THE MEDICAL STAFF

21. The responsible physician should not only be required to see the patient within a specified period of time after admission, but should also be required to sign the resident's admission note or write his or her own notes on the admission record at the time of examination. This should be routinely reviewed by Medical Records and by the division heads or department chiefs to ensure compliance.

22. Greater representation on the selection committee by members of the division or department concerned in the selection process in association with the input of the University.

23. The qualifications for chiefs of departments and heads of divisions should include experience in teaching and patient care, research, organizational abilities and interpersonal skills.

24. Greater supervision for residents in specialties, other than paediatrics, by reason of their limited experience with children.

25. All new physicians should undergo a mandatory cardiopulmonary resuscitation course within one month from the start of their employment.

26. The Hospital must plan for the future in the face of the reality of resident cutbacks. Since this may require greater presence of the active staff on the wards, the Hospital should give consideration to additional staff physician manpower. Consideration should also be given to a redefinition of the role of other professionals who could be trained to provide some of the services presently performed by the house staff.

CLINICAL SERVICES

27. A consolidation of clinical departments which would result in better control and direction.

28. Reviews of department chiefs should be structured to consider departmental activities to determine whether or not these activities are designed in isolation or are complementary to the objectives of the Hospital as a whole.

29. All children under the age of one month should have a mandatory paediatric consultation.

30. There should be a period of overlap at the end of a rotation to enable the attending physician who is rotating out of a service to follow his or her patients who are due to be discharged within 72 hours after the change of rotation. The new attending physician would be responsible for all other patients. The turnover should be explained to the parents, and appropriate changes noted on the chart so that any additional questions can be aimed at the new physician of record.

31. All x-ray interpretations should be double-checked by a staff radiologist before an opinion is rendered.

32. A mandatory gastroenterology consultation for all patients diagnosed as having psychogenic vomiting.

33. The new procedures in place to identify the responsible physician should be monitored and the identity of the responsible physician be made known to the parents.

NURSING

34. A clear and well-defined set of organizational and nursing practice goals should be developed for the Department of Nursing and for the individual units of the Department.

35. A comprehensive review and reassessment of the organizational changes presently being implemented should be undertaken within two years and monitored on an ongoing basis during the interim.

36. The plan to merge "like" wards should be reassessed in light of the substantial current nursing literature which suggests that 20-25 patients is an optimum number per ward. Where ward units are merged, staffing requirements and patient care assignment methods should be carefully set.

37. Assistant head nurses or nursing co-ordinators should replace team leaders and be distributed appropriately among wards. In specialized units, such personnel should cover around the clock, seven days a week.

38. The gradual phasing out of the RNA positions should continue through attrition.

39. The method of shared or participatory governance should become the mechanism through which decisions affecting nursing care and nursing personnel are made as opposed to a mere advisory structure, and this process should be strengthened considerably to permit change to take place in an orderly and comprehensive manner.

40. Discussions should be initiated with the Advisory Committee of the College of Physicians and Surgeons and the College of Nurses with a view to identifying additional procedures which could be performed by senior nursing personnel in the Neonatal Intensive Care Unit, in the

Intensive Care Unit and in Oncology, and the present system of certification should be extended to include these procedures.

41. Programs should be developed to assist nursing personnel to cope with the pressures and stresses of working in a complex tertiary care setting.

42. A quality assurance co-ordinator should be appointed, as soon as possible, to co-ordinate all aspects of the quality control of nursing.

43. A further redistribution of nursing staff should take place to compensate as much as possible for under and overstaffing.

44. The staff assigned to the Intensive Care Unit should be clinically expert and personnel from other wards should not be assigned to that area unless experienced in intensive care unit nursing.

45. Procedure manuals specific to the needs of particular units should be revised to include all procedures specific to that unit and should be fully indexed. The Standard Care Plan Manual should be updated.

46. Preference should be given to those with a nursing degree when hiring new staff for all nursing positions.

47. The present internship program should be made more educationally sound and capable of including diploma and baccalaureate graduates in an appropriate way; and it should become in whole or in part a necessary qualification for employment of those with no graduate experience in paediatrics within the previous five years.

48. The orientation program for new nurses in specialty areas should be improved and lengthened until such time as it can be incorporated in whole or in part into the internship program as described above.

49. Clinical teachers in appropriate numbers should replace teaching team leaders to perform the staff development and tutorial functions. The complement would vary as staff qualifications and expertise improve

through implementation of other recommendations in the area of educational qualifications.

50. The use of nursing rounds as an educational tool should be reassessed to be made more useful.

51. A full-time Director of Nursing Research should be appointed.

ANCILLARY SUPPORT SERVICES

52. The Departments of Biochemistry, Microbiology, Virology and Pathology should be organized into one Department of Pathology and Laboratory Services.

53. The development of an integrated information system for Laboratory Services.

54. The Department of Laboratory Services should be consulted with regard to proposed expansions of clinical services.

55. The Drug Monitoring Program should be given adequate support to ensure its effectiveness.

56. The staff allocation for Respiratory Technology should be increased to permit in-house coverage 24 hours a day, seven days a week.

57. Accreditation status for the Respiratory Technology program should be maintained by increasing the clinical exposure of the technicians.

58. Physiotherapists should be assigned to the neonatal wards.

59. The on-call service presently being considered by the Department of Social Work should be implemented in order to improve the overall contribution of the Department.

60. Whenever any laboratory results indicate something out of the ordinary, even when those results are generated under circumstances which render them questionable, further enquiry must be made.

THE DIVISION OF CARDIOLOGY

61. Guidelines and policies for the use of the Intermediate Care Unit must be developed and a definition of care for the unit be made available to the medical and nursing staff.

62. An increased presence of staff cardiologists on the ward at night.

TRACHEOTOMY UNIT

63. Increased parental involvement in the care of patients in the Tracheotomy Unit.

64. The assignment of at least one experienced nurse to each nursing team.

THE DIVISION OF NEONATOLOGY

65. The recruitment of additional neonatologists for a total complement of seven or eight. If necessary, there should be added financial compensation for neonatologists in order to fill and maintain such a complement.

66. The presence of a neonatologist in the Hospital 24 hours a day, seven days a week.

67. The training of nurses by a process of certification to assume responsibility for certain additional tasks presently performed by junior and senior residents.

68. The institution of a structured staff development program.

69. The division of the Neonatal Intensive Care Unit into two smaller units by reason of the complexity of care required.

70. The allotment of greater space per patient.

71. The Neonatal Transport Team should be utilized according to its present mandate. The transport assistant positions, or some appropriate alternative, should be retained to permit the team to fulfill this important function and offer total coverage.

72. The nursing staff assigned to the Neonatal Intensive Care Unit should be increased to provide for 18 hours a day of nursing care per patient. Further personnel from other wards should not be assigned to this area unless experienced in NICU nursing. The per diem pool of NICU nurses may need to be increased to permit implementation of this recommendation.

THE DEPARTMENT OF PHARMACY

73. The implementation of the balance of the recommendations made in the report by Dinel and Summers as quickly as possible.

74. The hours of service on weekends and holidays should be expanded to 24-hour coverage and, in the meantime, a more effective system for the provision of drugs during off hour coverage should be established; access to the pharmacy during off hours must be restricted to pharmacy staff.

75. A unit dose system should be implemented throughout the Hospital. Until this can be accomplished, a unit dose system with respect to specific drug items should be established. This system, we believe, has particular relevance in a children's hospital where standard dosages cannot normally be used.

76. The use of automated systems should be investigated and implemented wherever possible to increase the efficiency and productivity of existing manpower resources.

77. Increased space should be allocated for the implementation of a pharmacy based IV mixture program which would significantly reduce the potential for medication errors inherent in the present practice.

78. The impact of new or expanded clinical hospital programs on the Pharmacy Department should be considered well in advance of the implementation of such programs.

79. Where drugs are supplied to the wards in containers provided by the supplier and labelled by the supplier, the Hospital should over label the supplier's label with the hospital pharmacy label identifying the

name of the drug, the strength of the drug and, where appropriate, instructions for use.

80. Every effort should be made to complete the revision of the Pharmacy Procedure Manual at the earliest possible date.

81. The formulary should be reviewed with a view to reducing the number of drugs to be more economical and manageable.

82. Strict controls with respect to the borrowing and administration of medication.

83. The Hospital should seek legislation to prohibit drug manufacturers from using logos and labels for various drugs that are so similar as to be easily mistaken one for the other.

COMMUNICATIONS

84. The appointment of an ombudsman to improve communications between the Hospital and the public.

85. Meetings of the Medical Staff should be increased to four per year, one of which being a joint meeting of the Medical Staff and the Board of Trustees.

86. Members of the general Medical Staff should have greater involvement in committees.

87. Each medical department and division should have regular meetings.

88. The Executive Director should consider sending out a monthly letter to advise hospital employees of any developments taking place.

89. The Service, Education and Research Committee should give higher priority to ensuring better communication within the Hospital.

A PATIENT CARE SAFETY SYSTEM

90. The establishment of statistical surveillance of all deaths in the Hospital including all parameters necessary to determine if there is a significant trend or something untoward. This data should be forwarded monthly to the Risk Management Committee.

91. The Department of Pathology should analyse all autopsy deaths in the Hospital and submit a monthly report to the Risk Management Committee.

92. The establishment of a structured, formalized Mortality Review Committee with broad interdisciplinary representation including a pathologist, a clinical pharmacologist and an epidemiologist.

93. The Mortality Review Committee should convene monthly and its findings should be included in the statistical surveillance and transmitted to the Risk Management Committee.

94. The appointment of a formalized morbidity review system, the findings of which should form part of the statistical surveillance.

95. Incident reporting should be encouraged, and greater utilization of such reports to bring about remedial action where necessary. To this end, the confidentiality of the source of incident reports should be assured. In addition, it should be made clear that, other than in the case of gross negligence, the report will not be used in any disciplinary proceedings.

96. Identification of all Hospital personnel and visitors should be required as an additional security measure.

97. The Risk Management Committee should play the lead role in monitoring and supervising the patient care safety system. It should receive reports on a monthly basis, analyse all such information and recommend corrective action where necessary. To this end, all matters that are out of the ordinary should be brought to the attention of the Risk Management Committee.

98. The Chief Pathologist should be the physician designated to submit reports to the coroner. All reports to coroners should be directed to a single designated coroner's office. For future reference a record of the cases reported, including the name of the patient, the date of death, the name of the coroner notified and the time and date of notification, should be maintained.

Chapter XX

Conclusion

The Hospital for Sick Children has earned an international reputation for the quality of the services provided to its patients. We are all satisfied that it is still deserving of that reputation and of the complete confidence of the public. It is truly one of our indispensable institutions.

In the recent past there have been incidents at the Hospital which have resulted in a scrutiny unparalleled in any other like institution. We have commented at length on these incidents and on the Hospital's response to them. Those providing professional services at the Hospital have found it difficult to practise their profession under such circumstances, and their morale has been strained. It is a credit to their professionalism and skill that their work does not appear to have suffered to date, even under such stress. Their ability to continue to do so in the future will, we think, depend very much on the degree of support that the Hospital receives from the public.

Of continuing concern are the incidents which occurred in the Cardiology Division between July 1980 and March 1981. The Committee was not called upon to inquire into the cause or causes of any of the deaths which occurred during that period of time. As has been noted, that issue has been the subject of intensive and continuing police investigation and, of more recent date, of an epidemiological scientific study being conducted by the Center for Disease Control of Atlanta, Georgia, at the initiation of the Hospital and under the auspices of the Ministry of Health of this Province. As was earlier noted, our focal point was the present and our concern was for the future. Within the terms of our mandate, we have found no evidence of any untoward deaths of any patients with a cardiac ailment since that period of time, as has been noted earlier in this Report.

The Hospital for Sick Children is a very large and highly complex institution. The incidents which have occurred in the past must be put in the

context of the nature and number of patients treated, the emphasis on tertiary care in this Hospital, and the very highly innovative and complicated medical procedures which, by reason of the success in some cases, has unduly heightened the public's expectations.

In an effort to maintain the Hospital's role as a leader in child care, there has been a dramatic expansion in the clinical services and the appointment of new chiefs of departments and heads of divisions. This rapid change over a short time span has, as is to be expected, had an unsettling effect on many members of the medical staff, and, by necessity, was achieved at the expense of other clinical and support services. To achieve ongoing support for such expansion, it is mandatory that dialogue be extensive between all involved so that understanding, if not concurrence, is achieved.

As is the case in most other hospitals in Ontario and elsewhere, there is a strain on the financial and manpower resources. Present planning for the future is critical if the quality of patient care is to be maintained.

It is to be expected that under the close scrutiny which we have given to all the services in this Hospital, areas could be identified in the quality of patient care, in the management of the Hospital, and in the patient care safety system where improvements can be made. This would be the case, we think, of any other like institution given such close scrutiny.

In our opinion, notwithstanding the incidents which have occurred in the past, the quality of services presently provided in this Hospital is, in general, excellent, and these services are delivered by a dedicated, highly qualified staff. We are concerned, however, that if those areas which we have identified that have a direct impact on patient care and patient safety are not promptly addressed, there could very well be a deterioration in the quality of care to be expected of a hospital with the reputation of the Hospital for Sick Children.

The goal of this Hospital is that of excellence. To achieve it and to maintain it requires a constant search for improvement.

The recommendations set forth in the preceding chapter are made with a view to furthering the program of improvement which is already under way.

Schedule "A"

Newspaper Notice

Ontario

The Hospital For
Sick Children
Review Committee

The undersigned have been appointed by the Minister of Health for Ontario to:

1. Report on the quality of the management and administration of the *Hospital for Sick Children* in Toronto and the quality of the care and treatment of the patients in that hospital.

2. Ascertain specifically whether the *Hospital for Sick Children* has instituted appropriate patient care practices and procedures to protect the security of its patients.

3. Report immediately to the Minister whenever they ascertain that the practices and procedures in any aspect of patient care are inadequate or insufficient to protect the safety and security of the patients at the *Hospital for Sick Children*.

The undersigned would like to hear from any members of the public who can provide information to assist in our review. You may contact the Committee by writing in confidence by July 30 to:

The Hospital for Sick Children
Review Committee
MGS Box 16
Queen's Park
Toronto, Ontario M7A 1N3

Please include a telephone number where you may be reached for an interview at a convenient time.

Hon. Charles Dubin,
Chairman
Joan Gilchrist, Reg. N.
Hugh McDonald, M.D.
Henry Nadler, M.D.

Ministry of Health
Ontario
Larry Grossman, Minister

Schedule "B"

Radio Announcement

ANNOUNCER:

The Ontario Government has appointed an independent Committee to review the operations of the Hospital for Sick Children in Toronto. If you wish to discuss privately with the Committee any matters pertaining to the care and treatment of patients at this Hospital, write to:

The Hospital for Sick Children
Review Committee
MGS Box 16
Queen's Park
Toronto

That's:

The Hospital for Sick Children
Review Committee
MGS Box 16
Queen's Park
Toronto

Be sure to include a telephone number where you may be reached for an appointment with the Committee.

A message from The Hospital for Sick Children Review Committee.